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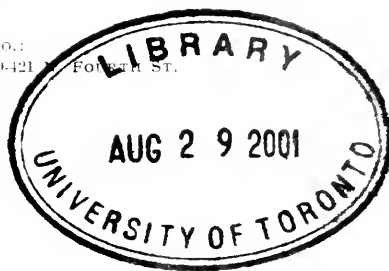
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ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
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THE PROGRESS OF RHINO-LARYNGOLOGY.

BY W. SCHEPPEGRELL, A.M., M.D., NEW ORLEANS, LA.

A review of the literature of the past year fails to reveal any decided innovation in the department of rhino-laryngology. There has been no diminution in the number of earnest workers, and investigations in the various branches have been faithfully continued, all the work, however, being practically in the same lines as during the previous year. This rest has enabled us to weigh the information already obtained and thus procure a more definite understanding of some of the unsettled theories of pathologic conditions and therapeutic measures.

In regard to the character of the normal nasal secretion, some experiments have been carried on during the past year, without, however, arriving at any definite conclusion. From a careful bacteriologic study of this subject, Park and Wright¹ maintain that for bacteria which have developed in the blood or secretions of other individuals, the bactericidal power of the nasal mucus is little or nothing and cannot be depended upon to prevent infection from virulent bacteria. This view is supported by certain clinical experience and teaches the importance of care with instruments used in the nasal cavities.

Attention has been called to a form of external rhinitis due to the

Klebs-Löffler bacillus in children convalescent from scarlet fever by C. Todd,² the term external rhinitis being applied to what is generally known as "vestibular" or "anterior" rhinitis. Although not membranous, this rhinitis is associated with the presence of the Klebs-Löffler bacillus in the nostril, this microörganism being absent in the fauces. It is contagious as vestibular rhinitis, but has not been observed to give rise to faucial or laryngeal diphtheria. It is not accompanied by rise of temperature, albuminuria or marked glandular enlargement as in other forms of diphtheria.

Another remedy for acute coryza has been suggested by D'Aquitol,³ who recommends the application of leeches to the lower portion of the nasal septum. The possibility of sepsis in this application should, however, not be overlooked, this complication being demonstrated by the report of Lenzman,⁴ in which general sepsis followed a furuncle at the entrance of the nostril in a strong woman of thirty-six years, which proved fatal in five days. Staphylococci were found in the exudated fluid, but there was no pus.

The advocates for the operation of turbinectomy appear to have suffered a reaction during the past year, and comparatively little has been published on this subject. The operation deserves a well-earned rest. Greville Macdonald⁵ has published some further investigations on the importance of the turbinated bodies in the respiratory tract and calls attention to the embarrassment of this process after turbinectomy.

In addition to the usual number of reports of foreign bodies in the nasal cavities, several additional cases of the Texas screw-worm^{6, 7} have been published, one case described by C. M. Robertson⁸ being followed by a fatal result. Cases of occlusion of the choanæ are reported by J. P. Clark⁹ and Gradenigo,¹⁰ the former describing a complete congenital occlusion, and the latter an occlusion of the right choana.

There has been considerable literature on the subject of the correction of deformed nasal septa, without, however, adding much to our former stock of information. The advantages of a submucous operation has again been brought forward by DeBlois,¹¹ who claims that it obviates the danger of making a perforation, heals more quickly than the ordinary operation, and is not followed by cicatricial tissue, which forms a lodging place for crusts of dry mucus. Quite a simple method for resecting the nasal septum without perforation is recommended by Escat.¹² It consists of injecting four minims of boiling water by means of an hypodermic syringe into the mucous membrane of the concave side, thus stripping this from the cartilage. The

convex side is then resected with a bistoury in a vertical direction. After cicatrization, the closure is insured by the approximation of the uninjured mucous membrane to the cicatricial membrane.

Gelatine, which has recently come into favor as a hemostat in general medicine and surgery, has been recommended in epistaxis by Carnot,¹³ who advises it especially in bleeders; he also advocates its use after tonsillotomy. It is applied by means of a syringe or piece of wool saturated with a 5 to 10 per cent gelatine solution in sterilized water. The addition of an antiseptic has been found not to interfere with the coagulative property of the solution.

Formaldehyde has been added to the list of therapeutic agents in ozena by G. L. Richards,¹⁴ who uses five to ten drops of a 10 per cent solution in eight ounces of hot water. The electrolytic treatment of this disease continues to be recommended by Retak and Scheppegrell¹⁵. The subject of the treatment of ozena by antidiphtheritic serum has been again brought to the attention of the profession by Holger Mygind,¹⁶ who claims that the injection of antidiphtheritic serum in genuine cases of ozena is the most effective of all treatments hitherto known. He afterward, however, makes a somewhat contradictory statement when he says that the presence of toxins is of no importance, but that it is the serum alone which acts, as he has obtained equally good results from the injection of patients with the normal serum of horses.

The observation of Gouguenheim's cases at the Lariboisiere Hospital¹⁷ indicated that some good results may be obtained from the use of the serum therapy in ozena, and shows that any drawback of a serious character may be avoided by using small doses. The author admits, however, that while this is the most convenient method for combating the fetor, hopes of a definite cure should not be held out to the patient.

Regarding the etiology of inflammation of the accessory sinuses of the nose, Howard and Ingersoll¹⁸ have made a careful bacteriologic study, and have demonstrated that, with a few exceptions (*aspergilli* and *vermes*), inflammation of these cavities are caused by microorganisms, the *diplococcus lanceolatus*, the *pyogenic staphylococci* and *streptococci*, the bacilli of the group of *Friedländer's bacillus*, the *bacillus diphtheriae* and the *bacillus influenzae* being the most important. The *bacillus of tuberculosis* has also been observed, which shows the importance of making a bacteriologic examination. It is, however, not necessarily pathognomonic of a serious condition, as indicated by a case reported by Gaudier,¹⁹ which was successfully

treated by opening through the canine fossa, curetting and packing with iodoform gauze.

The influence of plugging the nasal fossa in the etiology of inflammation of the maxillary antrum is shown by St. Hilaire,²⁰ who reports two cases following this procedure. An interesting case is reported by Molinié,²¹ in which the secretion was of a distinct bluish color and was supposed to be due to the development of a pyogenic colony in the frontal sinus of the right side.

In the treatment of empyema of the maxillary antrum, the operation of Luc has gained favor during the past year. Luc²² admits, however, that he is not entitled to priority in this operation, as Scanes Spencer has already described such a procedure, in which the canine opening, however, is not closed at the end of the operation. Caldwell has described the same operation, but without giving details or cases.

In certain forms of head-ache, especially frontal, E. L. Vansant²³ has found the forcible syringing of the accessory nasal sinuses with a stream of hot dry air a useful remedy. In some instances, the air is medicated, or nitrous oxide is employed.

In the treatment of empyema of the frontal sinus, Bryan²⁴ has somewhat modified the rules described in his original operation. In cases of extensive caries, he admits the impossibility of procuring healing in less than from four to six weeks, and, therefore, advises drainage, for some time at least, through the external opening instead of at once closing the external wound, as in his original operation. The Ogston-Luc method seems still to hold favor in empyema of the frontal sinus. The Cusber-Czerny operation has been somewhat modified by Barth,²⁵ who splits the nasal bone and the nasal process of the frontal bone, and forms a wider communication between the nose and the frontal sinus by removing the ethmoidal cells. The wound is sutured after the thorough removal of the frontal sinus membrane, and gives a fairly good cosmetic result.

Attention has been called by E. J. Moure²⁶ to the not infrequent occurrence of acute and subacute inflammation of post-nasal adenoids in adults, a condition which has been observed in any age up to fifty-five. Delstanché²⁷ has made similar observations, and Janquet²⁸ has operated on a woman of forty-five years for a voluminous adenoid growth.

The subject of tuberculous infection in adenoid growths has been extensively discussed, but with very diverging results. Goure²⁹ and Walsham³⁰ from an examination of a large number of cases were unable to find any evidence of tuberculosis, while Brindel³¹ found

proof of latent tuberculosis in $12\frac{1}{2}$ per cent. and Dieulafoy³² in as high as 20 per cent of the cases examined. A conclusion regarding this matter must therefore be left for future demonstration.

A number of fatal issues from the removal of adenoid vegetations has been reported. In a case described by Preble,³³ a fatal secondary hemorrhage developed on the eighth day, and in one by Hinkie³⁴ the untoward result was due to the chloroform used for the anesthesia. The latter calls attention to the investigations of the Viennese pathologists who have demonstrated that sufferers from adenoids frequently belong to an abnormal constitutional type, which has been found peculiarly susceptible to chloroform narcosis, and that therefore chloroform in such cases is inadmissible.

The subject of the location of the voice center has been made more confusing during the past year by the report of Onodi,³⁵ who claims as the result of his investigations that it is quite impossible to localize even approximately the voice center in the human brain. He reports a case of perforation in which the child breathed and cried after the brain had been cut off from the medulla at the level of the anterior corpora quadrigemina, much in the same way as Onodi's experiment in the dog. This field certainly requires further investigation.

A case of tracheocele following a scéance of suspension is reported by Sabrazes and Cabannes,³⁶ who claim that this is the only case of the kind on record. In explanation of the so-called laryngeal vertigo, McBride³⁷ advances the theory that the increased pressure on the walls of the alveoli interferes with the free circulation of the blood through the lungs, and consequently diminishes the amount of blood in the left side of the heart. In addition, the pressure upon the large intrathoracic vessels hinders the return of the venous blood.

The number of local anesthetics is being continually increased, without, however, offering any real advantage over those already in vogue. Orthoform, however, seems to be an exception, as good results from this anesthetic have been reported by Lichtwitz and Sabrazes³⁸ in laryngeal tuberculosis, the point of special importance being that it gave immunity from pain for from twenty-four to forty-eight hours after the application.

Two remarkable cases of urticaria^{39, 40} have been reported, the first involving the uvula, and the second, the larynx directly, both nearly causing asphyxia.

In tuberculous laryngitis, S. Solis-Cohen⁴¹ recommends formic aldehyde used with friction like lactic acid, a weak solution being

first used, and this increased up to 10 per cent. A case of tuberculosis of the larynx in a child four and a half years old is reported by Plicque⁴² which is of interest on account of the rare localization of tuberculosis in this region in children, Siébert⁴³ having been able to collate only twelve cases, two being in his own practice. Three cases of acute miliary tuberculosis of the pharynx are reported by Kicer.⁴⁴

The subject of malignant tumors of the larynx has received considerable attention, the tendency on the whole being to greater conservatism. The endo-laryngeal operation has been successful in a number of cases.

Chiari⁴⁵ has shown that laryngeal cancer is capable of cure in many cases, and that therapeutic nihilism is here altogether out of place. As a permanent cure can only be expected when the disease is in its incipency, a radical operation should be made as soon as a diagnosis of cancer is established.

A case of laryngeal carcinoma cured by endo-laryngeal treatment is reported by Noltenius.⁴⁶ He does not, however, endorse Fränkel's statement that the operation is void of all danger. The operation reported by Juraz⁴⁷ is of interest not only on account of the recovery of the patient, but also from the fact that after the endo-laryngeal removal of the vocal cords, the cicatrices originated two membranes resembling vocal cords, which had the fault that they were united anteriorly, but still enabled the patient to speak in a loud hoarse voice. The possibility of auto-inoculation in cancer, described by Semon and Butlin,⁷⁵ was also demonstrated in this case, as the epithelioma developed on the right cord and produced by contact the same change in the symmetrical part of the left cord.

Several successful cases of laryngectomies for epithelioma have been reported. In the case described by Bell,⁴⁸ a low tracheotomy was first done and afterwards the entire larynx removed; in De-page's case,⁴⁹ the patient recovered and is able to speak in a whisper. In this operation, Garré⁵⁰ attaches much importance to the position of the patient; a horizontal position with the head inclined backwards allows the secretion to drain away from the trachea. By attention to this point, he claims that the mortality has fallen to 20 per cent. He also believes that a preliminary laryngotomy is often necessary for a correct and early diagnosis of carcinoma laryngis. Brindel⁵¹ emphatically opposes this operation, and states that laryngectomy for malignant disease of the larynx should be entirely abandoned; thyrotomy should be substituted whenever there is still

time, and simple tracheotomy should be done when thyrotomy no longer offers any chance of success.

The value of erysipelous toxins in the treatment of sarcoma has been little advanced. In three cases reported by Baldwin,⁵² one of sarcoma of the upper jaw, one of round-cell sarcoma of the nasopharynx, and one of sarcoma of the tonsil, none were benefited by the injection of this agent, and all ended fatally.

A great deal has been written during the past year on the subject of diphtheria with regard to the value of its antitoxin. The weight of opinion has by far been in favor of serum therapy, although strong opponents have not been wanting. The time of making a bacteriologic diagnosis has been shortened by the Koplik method,⁵³ in which it is claimed that a diagnosis may be made within two and a half or three hours, the method depending upon the principle of forcing the growth of the bacillus during the first two or three hours at the most favorable temperature, 38° C. A new diagnostic stain has been described by Hewlett,⁵⁴ who claims it to be a rapid means of making a positive diagnosis.

The serum treatment of diphtheria is condemned by Kassowitz,⁵⁵ who even refuses to consider the Klebs-Löffler bacillus the specific cause of diphtheria, which he says is still to be discovered. He claims that the lessened mortality in recent years in Vienna and Paris is due to the fact that the disease is of a milder type. Another case of death from an immunizing dose of antitoxin has been reported by Nifong,⁵⁶ an injection of between three and four cm. of antitoxin of a strength of 1,500 units being used. Two girls had been given similar injections from the same bottle, without any untoward result being observed. Ten minutes after the injection, the patient developed severe symptoms, and death followed in thirty-five minutes in spite of all efforts.

The report of the Committee of the Clinic Society of London⁵⁷ is in accord with that of the Committee of the Pediatric Society.⁵⁸ It shows that in cases of diphtheria treated with antitoxin not only was the mortality noticeably lessened, but the duration of life in fatal cases also prolonged. With the exception of rashes, joint pains and fever, no prejudicial action was observed in the series of cases investigated, even when large doses were employed. The report of Krönlein⁵⁹ shows that the reduction of mortality from the use of serum therapy is from 12 to 20 per cent to 6 per cent.

There has been no new development in the treatment of goitre. Electrical treatment continues to be advocated by a number of writers, and the thyroid gland has been found of value in parenchymatous

cases,⁶⁰ but useless in the cystic form. Further progress in the treatment of exophthalmic goitre with the suprarenal substance has been reported by S. Solis-Cohen,⁶¹ who found sufficient improvement in the cases to justify a claim for the curative result of this method.

The treatment of tuberculosis by serum therapy has waned during the past year. While a few authors have favored it on scientific grounds,⁶² still the majority have reported adversely as to its therapeutic value. At the last meeting of the staff of the Charité, Berlin's large public hospital,⁶³ this subject was discussed, and, on the whole, very little said in its favor. Recently, even in lupus and localized laryngeal and mucous lesions no success has been reported, although in some cases improvement has been claimed. As tuberculosis is usually local and does not produce immunity after infection, Sanders⁶⁴ claims that it is probably impossible to effect a cure by serum therapy. It is also condemned by Denison⁶⁵ and Waxham.⁶⁶

The value of vaporized medicaments in these cases has been demonstrated by Thomas,⁶⁷ who proved the penetrability of vaporized medicaments into the air passages, a post-mortem examination having revealed stained oil globules within the finest bronchi and alveoli. By experiment it was also found that corpuscular bodies readily entered a diseased lung, so that vaporized remedies may penetrate diseased foci and cavities.

Among the various remedies advocated for pulmonary tuberculosis is ichthyol. Le Tanneur⁶⁸ having had good results from the internal administration of four-grain doses in capsules. Investigations have been recently made in incipient cases of pulmonary tuberculosis regarding the use of heated blood by Elestrom and Grafstrom,⁶⁹ who found a beneficial influence from this procedure. This treatment undoubtedly opens a wide field for experiment, but it needs to be more fully investigated before a decided opinion can be expressed regarding its permanent effects.

The subject of the X-rays in laryngology has been investigated by Scheier,⁷⁰ who found them of service in studying the physiology of the voice and speech, and in the physiology of deglutition. They have also been successfully used in the diagnosis of five cases of aneurism by A. Rosenberg,⁷¹ two of retro-sternal goitre, three of retro-sternal tumor or mediastinal tumor, and two of carcinoma of the esophagus. Albers-Schönberg⁷² claims to have used the X-rays successfully in a case of lupus.

The use of electricity in malignant tumors has received an interesting contribution in the investigations of Fabre-Domergue.⁷³ This author believes that orientation of the epithelial elements determines

the character of the tissue: with a centrifugal orientation, the elements develop with a continuous exfoliation of the horny layer and renewal of the *rete mucosum* without any tendency to break through the basement membrane, while centripetal orientation is abnormal and leads to partial or total infiltration of the tissues below the basement membrane. He believes that the property possessed by the electric current of turning certain unicellular organisms until their axes are parallel to the direction of the current may be used to restore the disorganized cells of epithelial cancers to their normal centrifugal orientation and arrest the growth of the neoplasm.

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THE PROGRESS OF OTOTOLOGY.

BY M. D. LEDERMAN, M.D., NEW YORK.

Assistant Aural Surgeon, Manhattan Eye and Ear Hospital; Lecturer on Diseases of the Nose and Throat, New York Polyclinic; Fellow New York Academy of Medicine and American Laryng., Rhinolog. and Otolog. Soc., Etc.

The retrospect of aural therapeutics recalls visions of the "old-timed poultice" and delayed action. Antiseptic surgery has accomplished much for the energetic aurist and has proved a boon for his suffering patient. The study of otology has made rapid strides during the past few years. Its foundation has been laid by the persistent efforts of clinical research.

To-day we recognize the importance of early and liberal incisions through the drum membrane, in assisting nature to accomplish its purpose. Under proper antiseptic precautions such assistance frequently prevents suppuration in catarrhal disease of the middle ear.

The dry method in the after-treatment of such cases is advocated by a number of observers. Too much moisture weakens tissue resistance. A strip of antiseptic gauze introduced into the canal acts as a serviceable drain. When the aural discharge is copious, it is necessary to resort to gentle douching with warmed antiseptic solutions.

In chronic catarrhal diseases of the middle ear, free aeration of this region, together with proper ventilation of the Eustachian tube must exist before definite results can be obtained. The influence of nasal and pharyngeal disease upon ear affections is now thoroughly appreciated by workers in this field of medicine. Adenoid vegetations in the pharyngeal vault are known to be the direct excitant in suppurative conditions, especially in early life.

Free nasal respiration augments the Eustachian tube's function, and any obstruction to the circulation of air in these channels, must necessarily act as an incentive to aural disturbance.

Politzer's air douche and the Eustachian catheter maintain their usefulness in the treatment of middle-ear affections. Delstanche's masseur, combined with the Siegel otoscope form a valuable combination for the relief of ankylosis of the ossicular chain. When employed in this manner, ocular observations can readily be made, thus avoiding traumatism of the parts.

For some years the writer has found undoubted improvement in some forms of chronic catarrhal otitis, from the use of medicated oils, sprayed through the Eustachian catheter, and then forced into the middle chamber by compressed air. In these solutions benzoinol was used as the "base" on account of its bland quality. The "return catheter" did not prove as serviceable as the ordinary hard-rubber instrument.

Knapp* has called attention to the importance of the functional examination of the ear. In ascertaining the acuteness of hearing, he has found the human voice the best test. The tuning fork is of great value in determining the range of audition. Bezold's continuous tone series is a valuable apparatus of this kind. This "series" extends from the lowest C ii (15 v.d.) to C³ (1024 v.), and consists of ten clamped forks. It is not a handy affair, and cannot be employed in routine examinations, as too much time is consumed.

As yet no therapeutic discovery has been offered as a panacea for persistent tinnitus. This distressing symptom frequently baffles our earnest efforts. When the tinnitus is due to circulatory disturbances, some benefit may be obtained from the internal administration of cardiac sedatives. Thyroid extract has been recommended by some, and found wanting by others. Thiosinamine (Merck's) has been suggested in cases of tinnitus, where inflammatory products restrict the movement of the ossicles. Keloid tissue has disappeared under the internal administration of this drug, and the supposition is that fibrous changes in the middle ear will also be absorbed. Clinical data upon this subject is as yet quite meager.

The supra-renal capsule has shown marked contractile properties upon erectile tissue, especially in nasal congestions when applied locally or when taken internally. If ringing in the ears is due to an engorged state of the vascular apparatus, this remedy will no doubt prove of benefit.

Various surgical methods are offered in the hope of arresting this harassing symptom. Incision along the posterior border of the malleus, with the introduction of a blunt hook through the opening, and repeated traction upon the malleus handle has been attempted by some with success. Mobilization of the stapes, together with removal of the incus and malleus, is recommended by other aurists.

*Archives of Otology, August, 1898.

It is impossible to promise a cure by such treatment, for recorded cases prove that the tinnitus not only returned, but actually became worse after such interference.

Among the remedies regularly employed to overcome suppurative conditions, boracic acid still holds a prominent place. Antinoline, the sodium salt of nosophen, is recommended as a harmless, non-irritating and powerful antiseptic. Peroxide of hydrogen has proven itself an excellent pus destroyer. Formalin in weak solutions is also efficacious.

Tri-chloroacetic acid has been used with good results in stimulating the edges of old perforations of the membrana tympani.

In mastoid involvement, early operation is now universally endorsed. When palliative measures have not given the desired result within forty-eight hours, surgical principles should be put into effect. If suspicious of mastoid disease, there is no reason for postponing the radical operation. Delayed action frequently results in extended invasion, which often ends seriously.

In the after-treatment of mastoid disease we must be influenced by the condition of the wound. When feasible we should employ a dry dressing, thus avoiding an excess of moisture, which tends to generate unhealthy granulation tissue. Of late I have used nosophen as a dusting powder, and have found it very satisfactory. Have observed evidences of the powder in the mastoid wound five days after the dressing, with no signs of retarded healing. Nosophen gauze may also be substituted for iodoform gauze with good effect. This iodine preparation has also given satisfaction in nasal surgery, as it has a decided desiccating action.

Our foreign confreres laud the radical operation in persistent suppuration of the middle ear. Panse, Hartmann, Noltenius, Zaufel, Grünwald and Passow, close the mastoid opening by primary suture, while Trautmann, Jansen and Siebenmann prefer to treat the disease by keeping an open post-auricular wound. When active symptoms cease, they close the mastoid opening by plastic ingenuity.

It is true that a fistula behind the ear is a disfigurement, but if a life is at stake, no chances must be taken on account of cosmetic reasons. The good results reported by such observers should certainly stimulate us in treating this ailment in a similar manner. Though Stacke's method is not free from complications, cautiousness will materially aid in avoiding serious consequences. Facial paralysis does occur when least expected, but time and electricity will accomplish much in bringing back lost function.

Milligan* also advocates early and more frequent resort to antrectomy in chronic suppurative otitis, which have resisted careful treatment for two months. The presence of an edematous swelling of the posterior-superior meatal wall, "the dip", is frequently the indication for opening the mastoid. Persistency of offensive discharge, and its appearance immediately after the middle ear has been cleansed, demonstrates the existence of a pocket of pus in the adjoining cavities. The surface temperature of the skin over the posterior wall of the meatus is a point of some diagnostic value in mastoid empyema. If disease exist, the temperature at this site is somewhat higher than at a corresponding area over the anterior wall.

In one hundred and fifty cases of mastoid operations analyzed by Milligan, ten (or 6 $\frac{2}{3}$ per cent) were acute involvements and were accompanied by the usual symptoms. In these cases rapid healing followed the opening of the mastoid antrum, with recovery of hearing power. Out of the 150 cases operated upon, ten (or 6 $\frac{2}{3}$ per cent) were subacute instances, without much local pain, with a copious discharge and progressive loss of hearing. Nine of these cases recovered with practically normal hearing. The other case did not remain under observation. One hundred and two cases (or 68 per cent) were distinctly chronic in character. Stacke's modified operation was performed in the last series, seventy-eight times. Out of this number, sixty-five resulted in complete recovery. All suppuration ceased and the antro-tympanic cavity became satisfactorily covered with skin. The hearing power was not improved by the operation.

This statistical report practically illustrates the position of radical treatment of chronic suppurative otitis. Clinical experience is the criterion upon which rational principles are founded. Conservatism is certainly a worthy quality, but when continuous treatment through the canal fails to accomplish a cure, we must unhesitatingly resort to more heroic methods.

Sinus thrombosis has received much attention during the past few years. Operations upon this channel are becoming more numerous and more successful. Timidity is gradually becoming a thing of the past, and free dissection of diseased areas is now boldly made. Whiting's† practical observations upon this affection are valuable contributions. The aurist has to deal with the infectious thrombus, which is due to the presence of chronic sup-

**Journal of Laryng., Rhinolog. et Otology*, November, 1898.

†*Archives of Otology*, February, 1898.

purative ear disease. Many interesting remarks are made upon the pathology of the disease.

The diagnosis of an existing thrombus of the sigmoid sinus is not easily made. Pain, usually radiating from the ear and extending over the side of the head, with edema of the mastoid and occipital region are significant local indications. Chills, high temperature and malaises are systemic symptoms most commonly observed. Pulsation of the sinus has no diagnostic value.

In operating upon sinus cases it is considered best to incise the sinus at the knee and descending portion. This may be done with the chisel and rongeur forceps. The mastoid antrum should always be opened as infection spreads from this cavity. The hypodermic needle is of service in locating the thrombus.

Ligation of the jugular vein in these cases is an important element. Where the obstruction does not extend below the jugular bulb, we may not be called upon to tie the vessel. If, however, we are not successful in re-establishing the circulation near below the bulb, Whiting states that it is the operator's imperative duty to ligate the vein immediately. Where toxic symptoms are pronounced, or where metastases are already present, authorities agree that it is necessary to tie the vein as a preliminary step in opening the sinus. When the jugular has been ligated in two places, the intervening portion should be resected, as the neck wound heals more rapid and satisfactory, and the liability of supuration is much less. Statistics show that in sinus operations, where simultaneous ligation of the jugular has been performed, the percentage of recoveries is greater.

Labyrinthine deafness is still refractory to our present treatment. In some of these dubious cases, pilocarpin and strychnia, together with applications of electricity, have given some improvement. Traumatic involvement of the inner ear is not as serious as a systemic invasion. Hypodermic medication is recommended in specific disease of the internal ear. (LEDERMAN.)

38 East 60th St.

THE ABUSE OF THE ELECTRIC CAUTERY IN THE NOSE.*

BY H. HOLBROOK CURTIS, M.D., NEW YORK.

In 1889 I sounded in the Academy of Medicine a warning against the indiscriminate use of cocaine in the nostrils, and I was indeed surprised to find that the consensus of opinion at the time was in direct opposition to my contentions. Upon one or two occasions later I ventured the prediction that the galvano-cautery would not be employed for any length of time upon the septum narium, and it is in support of this hypothesis that I call the attention of the Section to one or two cases of grave complications following this procedure. My opinion has been that the use of the galvano-cautery is both unsurgical and unscientific, and admits in its employment the possibility of unfortunate results.

We are perfectly well aware that the use of the pocket handkerchief in too roughly drying that portion of the mucous membrane of the septum within the vestibule often gives rise to an excoriated condition, which leads to atrophy of the glands and ulceration of the membrane. The use of the finger nail in removing crusts in this vicinity frequently causes the same state of affairs, and, furthermore, the repeated introduction of germs, by reason of this habit, may induce the ulceration to go deeper and affect the cartilage until a perforation may obtain between the nostrils. We know that enchondroses and deviations are most frequently found in this locality, and over these thickenings of the cartilage the mucous membrane is usually tense and very thin. This circumstance will undoubtedly account for the malnutrition of the cartilage in this particular area, and will possibly explain the fact that the process of repair of the tissues is oftentimes unsatisfactory. The use of the saw, trephine or knife in these cases is such a simple procedure, and the results so uniformly satisfactory, it seems scarcely credible that there should remain any advocates for the employment of other methods to reduce such deformities. An experience of many years has shown me, however, that the practice of cauterizing the nasal septum prevails altogether too generally, and unfortunately has the sanction of some of our best known specialists.

It is not alone necessary that the nostrils become pervious as the

*Read before the Section of Laryngology, N. Y. Acad. of Med., Nov. 23, 1898.

result of operation, as would seem to be the sole object to be attained by some, but we should carefully consider the question of the best means of preserving the integrity and continuity of the mucous membrane.

Virchow has recently shown that the process of repair in cartilage is not due to a process of exudation, but, like the process of repair in the cornea, due to a proliferation of pre-existing cells. Now the effect of the thermo-cautery is to change the nature of the cartilage cells and to prevent the power of healthy repair by proliferation, which most clearly demonstrates the reason of the unhealthy cicatrices which one finds in this particular cartilage of the septum after cauterization by heat. Granted that the repair of cartilage is not alone dependent upon the continuity of the perichondrium and mucous membrane covering the wound, we must look to the integrity of the cartilaginous cell elements themselves for a satisfactory process of repair. Heat, we know, is disastrous to this condition, and it is undoubtedly the changes effected in the cells themselves by that agent which accounts for the necrosis and consequent perforation so often found in the septum at longer or shorter intervals after the use of the thermo-cautery.

It would seem almost too trite a theme to call attention to the numerous cases of synechie in the nostrils, the result of cauterizing both the septum and the turbinates at the same time: but I have seen a patient to-day in my office who has just returned from Europe with an almost total occlusion of the left nostril, the result of repeated applications of the electro-cautery extending over a period of almost a year, at the hands of a foreign specialist of repute. In case the turbinates must be touched with the cautery the septum should be protected by tinfoil to avoid such accidents.

Before leaving the subject of the cartilaginous septum, I wish, for illustration, to cite two cases which occur to me:

Case 1. A young lady, aged twenty-three, blonde, well-nourished, came to my office in 1894 with a perforation in the septum the size of the thumb nail. She complained of excessive scab formation in the nostril and extreme nervousness, due to constant consciousness of a dry and irritable condition of the nose. Investigation proved that she had been operated on two years previously, on both sides, with the thermo-cautery, the wounds apparently healing at the time, but subsequently breaking down with resulting perforation. The patient had become a neurasthenic, and was constantly using all manner of sprays and ointments to attempt to relieve her condition.

Case 2. A woman of forty-five was referred to me for dry

catarrh." I found a precisely similar condition, but to a greater extent, than in the case just cited. Although the nose was pervious, she suffered the greatest discomfort, and was constantly longing for air and felt she could not breathe. She had consulted many specialists, and had been sprayed and cauterized repeatedly. She had become a monomaniac on the subject of her nose. A female Cyrano de Bergerac. Her husband told me that her nose was her sole subject of conversation, and she was constantly oiling and spraying it in order to get air, as she expressed it: in reality to relieve a dryness due to great loss of membrane.

These cases represent, in an exaggerated degree, many of lesser magnitude in which the neurasthenia has not become so marked. That disturbance in the continuity of the septum causes disorders in the mental state has been observed by the writer. Frequently a loss of tissue, with perforation, has been observed to exceed in the exaggeration of mental reflexes any of the disorders we usually ascribe to a stenosis: but, while we may relieve a stenosis, we can never do much for the unfortunate who has an artificial fenestration of the cartilage of the septum.

It is to be observed that a congenital perforation is not accompanied by the same nervous phenomena which result from an acquired loss of tissue.

The use of the thermo-cautery upon the turbinate bodies is open to nearly the same objection, though from a totally different standpoint. We know the intimate anatomical relationship between the cerebral sinuses and the ethmoidal venous plexus, and Lange, Quinlan and Wagner, among others, report cases of fatal meningitis as the result of cauterizing the middle turbinate with electricity. Collins has called attention to the liability of meningitis from nasal operations in general.

Anyone who has read the very able paper of Dr. Robert Levy, presented before the Laryngological, Rhinological and Otological Society at Pittsburg, last May, and published in the *Annals of Otolaryngology, Rhinology and Laryngology* for the same month, will be surprised at the number of cases cited which have resulted fatally from comparative slight intranasal operation. The cases which have been reported in which death from meningitis, sinus thrombosis and the like, has resulted from the use of the electro-cautery upon the turbinates, or in searing the stumps of excised polypi, are offset by an equal number of fatalities, resulting from quite as insignificant operations within the nasal cavities, so it is hardly fair to use the statistics which might be collected against the use of the electro-

cautery without tabulating the many fatal results which have followed the removal of spurs and many other operations of even so slight a nature as the passage of a Bowman sound through the lachrymal canal.

That the thermo-cautery should never be used in the cartilaginous nasal septum I am convinced for the reasons above stated. In how far the electro-cautery should be employed upon the turbinates, I leave to the judgment of the Section. For my own part, I have done with the use of it, except in breaking down webs of adventitious tissues at the inner border of the vestibule.

118 Madison Avenue.

An Operation to Remove the Deformity from a Fracture and Displacement of the Triangular Cartilage of the Nose—

H. PEGLER, M.D.—*British Med. Jour.*, Dec. 22, 1897.

The contour of the nose was disfigured by a deep depression of the dorsal surface below the bridge, which latter, still maintaining the prominent position of an originally well-shaped nasal organ, exaggerated the deformity of the cartilaginous portion. The disfigurement was so considerable that it interfered seriously with the patient's prospects in business, and he was willing to undergo any operation that might be devised for his relief.

Chloroform having been administered, an incision was made along the middle lines of the nose, following the scar already there. The integuments were dissected back from the underlying cicatricial tissue, and held aside by retractors. The first step consisted in passing a rather stout silver wire through the sunken cartilaginous ridge from side to side (incorporating the two surfaces that appeared as if separated), and taking care that the needle did not encroach upon the mucous interior, by feeling with the tip of the finger that this depth was avoided. This portion was now threaded and under control, and capable of some elevation by traction upon the wire. The second step consisted in first sawing into the projecting angle of the nasal bones from above obliquely downwards and forwards until the osseo-cartilaginous juncture was reached.

At this point the sawn fragments (for there were two, a larger semi-cartilaginous on the right side and a smaller bony spicule on the left) were turned down, and made to assist in filling up in an inverted position the hollow below. A hole was next drilled with a center bit through the bones about 2 cm. above the sawn surface, and one end of the wire that had perforated the cartilages was carried up through it. In this manner gentle traction was exerted upon the depressed portion so as to elevate it in some degree to its proper position. Finally, the end of the same wire was brought down over the fragments of bone, and made to lie flat and keep them *in situ*. The wires were then trimmed, the wound thoroughly washed with antiseptic solution, its edges brought together by five or six catgut sutures, and covered over with a layer of gauze sealed down with collodion.

WATSON WILLIAMS.

THE SUPRA-RENAL BODIES; SOME REMARKS UPON THEIR PHYSIOLOGY AND THERAPY WITH SPECIAL REFERENCE TO RHINOLOGY.*

BY JAMES E. NEWCOMB, M.D., NEW YORK.

Attending Laryngologist to the Demilt Dispensary and to the Roosevelt Hospital Out-Patient Department, New York City; Instructor in Laryngology,
Cornell University Medical College.

Some time ago my attention was called to a possible use of extract of supra-renal capsule in certain affections of the nasal mucosa. Naturally I was led to look up the general subject of these structures, and it has occurred to me that it would be opportune to call to your notice some of the facts I learned. In so doing I disclaim any attempt at originality and bring to you only the ideas of others, begging to supplement these with a little personal experience along the line of therapeutic application.

In my own student days but little attention was called to these structures. We were taught that in Addison's disease the organ was affected, generally in the way of being the seat of tubercular inflammation, the cortex being hardened while the interior was soft and cheesy. We were taught that this lesion was fairly constant but that its relation to the disease was but imperfectly understood. The adrenals (to use the modern term) were included in that mysterious group of structures known as the ductless glands which were supposed to have something to do with the elaboration of the lymph and possibly of the blood. This view dates back to Haller in 1776. As to the constancy of the lesion, three possible conditions have been found to exist:

1. In Addison's disease, the adrenals may be diseased.
2. In the disease they may be intact.
3. They may be diseased without the presence of the symptom-complex which we now call Addison's disease.

Lewin's statistics show adrenal lesions in 74% out of 285 cases; Gilman Thompson found primary or secondary tuberculosis in 80% of all cases studied by him: in the remainder, lesions were wanting or else there were other atrophic states. A point made by Fenwick is that the bronzing of the disease is associated with cortical lesions of the adrenals.

*Paper read before the Roosevelt Hospital Alumni Association, October 28th, 1898.

It has furthermore been shown that absence of symptoms when the structures are involved, may be due to the fact that other and healthy portions of the gland hypertrophy and take on a compensatory function. This view is set forth by Simmonds, who concludes that the capsules belong to the "pairing" organs of the body in which one undergoes vicarious hypertrophy upon disease of the other.

In 1869, Brown-Séquard advanced the theory that all glands, whether possessing excretory ducts or not, give off something to the blood that is of general importance to the organism in the direction of its general nutrition. Some twenty years later, he introduced into clinical medicine the term "Internal Secretion," giving it the sense in which we understand it to-day.

On the basis of this modern conception, every act of nutrition is accompanied by an internal secretion of some sort. It would seem that many, although not all, of the glandular tissues of the body add something to the blood, or in some way affect its composition, and that this activity is either essential or helpful to the maintenance of the normal functions of the organism. Naturally there grew out of this the idea of the therapeutic application of animal extracts. Some of us will recall the joy with which the advent into therapeutics of testicular juice was hailed by some of our jaded fellow citizens. But after a lapse of ten years the fact confronts us that with the exception of thyroid extract but little definite progress has been made in this direction.

Histological research seems to show that in the case of the thyroid bodies, the peculiar secretion whatever it may be, is contained in the so-called colloidal material which accumulates in the interior of the vesicles and that the act of secretion consists simply in the rupture of the walls of these vesicles at some point and the discharge of contents into the neighboring lymph channels.

In a general way what has been found to be true of the thyroid bodies seems to be true of the adrenals. These organs are found in all classes of vertebrates and would therefore seem to be structures of some importance. Experiments have been made with the human adrenals and also with those from the calf, sheep, cat, dog and Guinea pig. In 1856 Brown-Séquard showed that removal from the body of these organs caused the speedy death of the animals under experiment, death coming on sooner even than when the kidneys were extirpated. In some species of animals there seem to be accessory adrenals, and this fact may account for the discrepancies which exist in the published records of different experimenters. Removal of

one organ does not seem to cause any particular disturbance, but if both are taken out there follow extreme muscular weakness, asthenia and in the case of dogs a great fall of blood pressure and cardiac weakness.

The first definite results of the physiological properties of these organs came from injecting their extracts into living animals. In rabbits, convulsive movements appeared, followed by paralysis. More careful experiments made by Schaefer and Oliver, and also by Cybulski and Szymonowicz, showed that extracts of the medulla of the adrenals when injected into the veins of living animals produced the following definite results:

1. Extreme contraction of the arteries shown to be of peripheral origin.
2. A remarkable and rapid rise of blood-pressure which took place in spite of powerful cardiac inhibition and which was further augmented if the vagi were cut or the inhibitory nerves of the heart were paralyzed by atropia.
3. Central vagus stimulation so pronounced that the auricles came to a standstill for a time while the ventricles continued to contract, but with a slow, independent rhythm.
4. Great acceleration and augmentation of the contraction of the auricles and ventricles after section of the vagi—the auricular augmentation being especially marked.
5. Respiration only slightly affected, becoming more shallow.

The effect is temporary, depending somewhat on the dose. After a few minutes both circulation and respiration are restored to their normal. New injections promptly repeat the sequences named above. If the kidneys are tied off, the effect of the injections does not seem to be at all prolonged. There cannot therefore be a rapid elimination of the substance by the urine. It is probably destroyed or neutralized in the tissues.

As to the mode of action on the blood-pressure, all agree that the arterioles are constricted. The vaso-motor centers in the medulla and cord seem to be directly stimulated. Some believe that this action is exerted directly upon the muscular fibres themselves in the walls of the vessels. If the circulatory centers in the cord and medulla are destroyed no rise in blood pressure can be obtained. It is also claimed that the ganglia in the substance of the cardiac muscle are directly stimulated and that this is a factor of importance in the circulatory condition.

Thus much having been determined, the next question to be considered is, does the substance which produces these effects exist normally in the adrenals or is it a post-mortem product?

It happens that we have direct evidence that the substance is a product of the normal metabolism of the gland. The Polish observers named above found that blood drawn during life from the supra-renal vein would, when injected into the circulation of a healthy animal, produce the same effect as supra-renal extract, although less marked. Blood from any other vein did not produce this effect. As the blood from the adrenals always contains the active principle, we are justified in concluding that the latter is a normal product of the metabolism of the medullary cells of the gland and that it is being discharged directly into the blood. *It must therefore be exerting a constant influence upon the blood pressure.*

Hence the deduction that the true physiological office of the adrenals is to furnish this stimulant to the blood. It is also thought to act as a tonic upon all muscular tissues, though it is still disputed as to whether this tonic effect is exerted directly upon the muscular protoplasm or upon the various nerve centers which govern the muscles. A most suggestive fact from the clinical standpoint is that in Addison's disease, the adrenals do not contain this stimulation substance.

The foregoing views are not however accepted without some modification, that is, there is another hypothesis as to the office of the structures. They may, like the thyroids, furnish an antitoxine secretion capable of neutralizing or destroying certain products of body metabolism. These toxins which are to be neutralized represent retrograde metamorphosis. They are the results of metabolism of the muscular tissues. The asthenia which follows the removal of the adrenals is somewhat like the effect produced by injecting extracts of fatigued muscle into the general circulation. The main argument in favor of this view is the fact that if the blood of an animal deprived of its adrenals and beginning to show the usual results of this deprivation, be injected into the circulation of another animal from which the adrenals have just been removed, a toxic effect is noted. It must be added that the weight of evidence is in favor of the stimulation theory.

The next point to consider is, what is the nature of the substance or ingredient of the adrenals which exerts these effects?

Prof. R. H. Chittenden says that there is some evidence of the existence of two distinct bodies, physiologically active: one insoluble in 90% alcohol, possibly the substance named by Fränkel "sphigmogenin," which increases blood pressure, while the other, which readily dissolves in alcohol, causes paralysis of the heart and muscles, death ensuing from suffocation. The active principle is

non-volatile and its activity is not destroyed by mineral acids or by gastric digestion. It is gradually weakened by alkalies.

According to others, the toxic action is due to the presence of neutral glycono-phosphate. The active principle seems to reside in the medulla of the gland. It is not destroyed by boiling and does not dialyze. Experiments made by the observers at Johns Hopkins Hospital seem to prove that the active principle is alkaloidal and that in all probability it belongs to the pyridine bases.

Finally, let us consider the therapeutic possibilities which adrenal extracts suggest.

Naturally Addison's disease is the malady coming first into one's mind. As to positive results obtained in the treatment by adrenal extract in this disease, it may be said that Kinnicutt was able in 1897 to collect notes of forty-eight cases thus treated. Of these six were reported as well, twenty-two improved, eighteen unimproved and in two the treatment had seemed to aggravate the symptoms. Forty-five grains of the gland are suggested as the daily maximum dosage.

The extract has also been used as a heart tonic. It is said to increase the number of the red blood cells. It should be given by the mouth. Attempts to administer it under the skin have not been satisfactory, and moreover there seems to be an especial liability to abscess formation. It has relieved attacks of angina pectoris.

As to the causes of failure in certain cases of Addison's disease, it must be remembered the organic change is not always confined to the adrenals. It frequently and progressively invades neighboring structures. All the extract can do is to supply to the general system material which should have been furnished by the healthy adrenals. Obviously the local lesion cannot be in the least benefitted. If the latter be cancerous or tubercular, or of any nature which makes it progressively invasive of new tissues the extract must fail.

Locally the extract has been used in solution in various diseases of the eye, ear, nose and throat. For this purpose a watery preparation can be employed. It does not keep well and must be freshly made. From ten to twenty grains should be dissolved in an ounce of water and the resulting mixture filtered after being thoroughly shaken and allowed to stand for several hours. In regard to the amount which a given quantity of water will take up or exhaust, I would say that after mixing sixty grains with two drams of water, which by the way should be boiled before using, and allowing the same to stand for several hours, it was found by weighing the dried filtrate that only about one-half of the sixty grains had been taken up. This would seem therefore to be the maximum strength of

solution which it is possible to obtain, *i. e.*, fifteen grains to the dram.

Upon mucous membranes it is without doubt the most powerful astringent we have, and it can be used for a variety of purposes. One drop of a one per cent solution instilled into the eye will blanch the conjunctiva and lid in forty seconds. Hence a possible use is in cases of hyperesthesia of the conjunctiva where it is desired to induce anesthesia by the later use of cocaine. Adrenal extract is not anesthetic or antiseptic. It is also incompatible with cocaine and must therefore be used in alternation with the latter.

My own personal attention to this subject is derived from an interesting paper read by Dr. Henry L. Swain, of New Haven, before the last Congress of the American Laryngological Association held in Brooklyn in May of this present year. His conclusions are as follows:

1. The aqueous extract of suprarenal gland is a powerful local vaso-constrictor agent and a contractor of erectile tissue. It can be used in very considerable amounts without dangerous or deleterious effects, locally or constitutionally.
2. These same effects can be reproduced in the same individual apparently any number of times without entailing any vicious habit to either the tissue or the individual.
3. The use of the extract seems to heighten the effect which might be expected from the local use of any drug.
4. In acute congestions, it has the widest application and greatest opportunity for good, but in certain chronic conditions of the hay-fever type, where redundant tissue seems prone to develop, it can be relied upon as one of the most helpful adjuvants at our command.

My own experience with the remedy has been somewhat limited, but I am prepared to fully corroborate what Swain has said. It is really remarkable to notice how the redundant tissue so often met with in the nose will shrivel and become pallid when the solution is applied. Of course, in hay fever, it is only alleviative. This disease is now recognized as a composite of three factors:

1. A neurotic predisposition which can be referred to the uric acid diathesis or other constitutional vice.
2. A local abnormality in the nose, and
3. The impact upon the diseased tissue of some irritant from without. This latter may be dust, plant-pollen or any one of a large variety of substances.

Consequently the extract will only relieve. But it does relieve to a very great degree the most troublesome symptom from which these

patients suffer, namely, the stoppage of the nostrils by the engorgement of the intra-nasal tissues. It has been used by many of the workers in this special field, and their testimony is practically unanimous in its favor. Occasionally we meet with patients with some personal peculiarity which seems to make them obdurate to its effects. One or two colleagues with whom I have spoken have had this experience, but from all the testimony at our command there is no reason to doubt but that it is a valuable adjuvant to our therapeutic resources.

So far as I know, Dr. W. H. Bates, of New York, was the first in this country to employ the remedy for local affections. It comes in commerce as the saccharated extract of the adrenals of the sheep, and costs about two-thirds as much as cocaine.

118 West Sixty-ninth Street.

Suprarenal Capsule in Eye, Nose and Throat Work—W. F.

SOUTHARD—*Pac. Med. Jour.*, Vol. xli, No. 11, Nov. 1898.

The most satisfactory results have been from its use in operations on the nose. The author at first found it necessary to have a new solution made every two or three days. Lately, however, laboratory experiments made under his directions had succeeded in making a stable solution by prolonged boiling without in any degree impairing its virtues.

In using the solution, the nose is first cleansed; a 4 per cent solution of eucaine is then applied upon cotton for five or six minutes. This is followed by a 4 per cent solution of the suprarenal capsule applied on cotton.

EATON.

SOME ANATOMICAL POINTS IN THE STRUCTURE OF THE LINGUAL TONSIL OF PRACTICAL BEARING ON ITS PATHOLOGY.*

BY LENNOX BROWNE, F.R.C.S.

Senior Surgeon to the Central London Throat and Ear Hospital, etc., etc.

Kronenberg in his classical articles on diseases of the fourth tonsil, which appeared in the *Berliner Medizinische Wochenschrift* in 1894, is so good as to ascribe to me "The merit of having decidedly demonstrated that the complications of symptoms which have been called *globus hystericus*, and which up to then had been considered the expression of a functional neurosis, is frequently due to real anatomical changes in this region, and had only been overlooked because examination had been incomplete", and Escat, of Toulouse, in a recent very complete report on the subject to be presented to the French Society of Otolgy, Laryngology and Rhinology, also says that "Lennox Browne appears to be the first author who has occupied himself with hypertrophy of the lingual tonsil." These remarks refer to my communication to the International Congress of Laryngologists, held at Milan in 1880. Since that time the literature of this region has become so considerable that a complete bibliographical list contains the names of at least one hundred authors of all nations who have contributed to our information on the subject. As usual in matters laryngological, the United States is well represented, and I find recognition of the importance of diseases of the lingual tonsil in articles by Holbrook Curtis (1884 and 1889); Gleitsmann (1887); Beverley Robinson (1888); Farlow (1888); Roe (1889); Richardson (1889); Clark (1890 and 1895); Bosworth (1892); Clarence Rice (1894); Chamberlain (1894); Bryan (1896); Quinlan (1897), and Bernays. There may be others whom I have overlooked. I do not fear therefore that at your association I shall find sympathy with the "all but" contemptuous manner with which the subject is ignored in the contribution on diseases of the nose, pharynx and larynx to the latest British system of medicine; for what is said is contained in less than twenty lines in an article which extends to close on 200 pages. I may perhaps remark that, short as the observations are, they contain one original suggestion.

*Read before the American Laryngological, Rhinological and Otolological Society, 1888.

namely, that "the employment of the galvano-cautery, which is often recommended is not free from the risk of causing violent parotitis." I presume that "parotiditis" was the word intended to be used, but in any case, those of us who are anatomists as well as those who are surgeons—and the throat specialist should be both—can afford to smile at this timorous warning.

The reason I quote this article is that presumably representing the most recent views, it assumes that there is an absolute identity between diseases of the lingual tonsils and of the palatine tonsils, and this I suspect is a very general misconception. It is however not supported by what we know of the anatomical and histological features of the various tonsillar structures which go to form the lymphoid ring of Waldeyer. For example, Escat has given it as his opinion that the lingual tonsil is in the young child not only fully developed (in this he differs from Bickel) but at its period of greatest vitality; and that as in the case of the pharyngeal tonsil and in perhaps a less degree in the palatine glands, the lingual tonsil enters into a period of atrophic retrogression at the age of puberty. And further that in early adolescence, at the age of twenty years, the lingual tonsil ends by being reduced to some follicles of lenticular shape, so scattered as to represent complete atrophy. This view, which is also, I think, very generally adopted is not only contrary to fact, but it is surely inconsistent with the remark of this particular observer which again represents general knowledge that chronic hypertrophic inflammation of the lingual tonsil is certainly one of the most interesting for practicing laryngologists, for it is without contradiction the most common,—and again that circumscribed inflammation of the fourth tonsil is observed almost exclusively in the adult.

My experience on this question, neither short, small nor unobserving, has led me to state in the forthcoming fifth edition of my treatise on diseases of the throat and nose, that while it may be true that the lingual tonsil is equally fully developed with the pharyngeal at early life, the difference between the lingual tonsil and the pharyngeal and the palatine is the circumstance that the first not only does not undergo an atrophic retrogression at puberty, but that it continues to grow while the others are relatively diminishing. Bickel indeed, in an able article in Virchow's Archives (1884) takes the view that the fourth tonsil, as the lingual double tonsil has come to be called, is less completely developed in childhood than are the faucial and pharyngeal. However that may be it is exceedingly rare for the lingual tonsil to be hypertrophied before

the period of puberty. The recorded cases of such a condition in the child are indeed very few—two only I think—and, in one which occurred at the age of seven years, McBride, who reports it, states that there were no symptoms. The other case, that of Hickman, was congenital, and death took place shortly after birth, from asphyxia, directly referable to the growth.

Admitting with Swain, Schœde, and other anatomists, that the general structure of the whole tonsillar ring is histologically identical, there are certain important points of distinction to which my attention has been drawn by my colleague, Wyatt Wingrave, pathologist of our hospital. In the first place it is quite common to find in the pharyngeal tonsil, patches of honey-combed homogeneous colloid-looking substance enclosed in what is apparently the remains of a lymph vessel, for these channels are for the most part much dilated. This substance is probably fibrinous in origin, the result of thrombotic changes. The reticulum itself also appears to be undergoing a similar degeneration. These conditions may reasonably be interpreted as indicative of a retrograde metamorphosis. They are never seen in either the faucial or lingual tonsils.

Another point is that the mucous and albuminous glands of Henle and Salter, only occasionally seen in the palatine tonsil and never in the pharyngeal, are notably abundant in the neighborhood of the lingual tonsil, it being exceptional not to find them. Moreover below the lymphoid layer of the lingual tonsil, skeletal muscle fibres are plentiful, and the cellular tissue is more dense than in the faucial.

A further point of anatomical distinction is the occasional presence of crypts in the lingual tonsil, lined with columnar ciliated epithelium, a peculiarity to which attention was first drawn by Wyatt Wingrave, and one not to be found in the other tonsils. The phenomenon is not perhaps of clinical interest since it is of a purely vestigial nature.

It is again worthy of notice that such early observers as Kölliker, Luschka, and Lewin have all drawn attention to the very superficial position of the veins at the base of the tongue, and I venture to question the accuracy of Escat's statement that they are invisible in the young child, because they are hidden in him by the thick bed of lymphoid tissue, for such a reason does not hold good with the undoubtedly increased prominence of the veins of other portions of the tongue with the advance of years, and whether as obvious in the child as in the adult, the veins in this situation are *always* superficial. Nevertheless it is doubtless true that varices

of the veins at the base of the tongue may exist without overgrowth of the lingual tonsil, or even when it is atrophied and that this varix constitutes of itself a diseased condition which gives rise to symptoms of such importance as to demand treatment.

The pathological bearing of the anatomical facts to which I have ventured to draw the attention of the Association is not a fanciful one. We can understand that not possessing the various evidences of a tendency to degenerate of which the colloid process is but one of those possessed by the pharyngeal tonsil, inflammatory diseases of the lingual tonsil are pronounced at periods of life when atrophic changes are as a rule complete in the pharyngeal tonsil and advanced in the palatine. For example, on the morning of the day on which I commenced to inscribe these remarks, I was consulted by a lady aged 72, on account of pharyngeal tenesmus—a term originated by me and now generally accepted. The symptoms were found to be due to a notable hypertrophy of the lingual tonsil, with marked varix.

The abundance of mucous and albuminous glands which we find in the lingual tonsil, gives a higher degree of moisture to that region and may account for the lessened disposition to acute inflammations of this structure, for not only does the careful collection of all recorded cases bring but very few to our knowledge, but in our daily experience phlegmonous, or even catarrhal inflammations of the lingual tonsil are surely of quite rare and exceptional occurrence. Nor do I think that it is common for us to witness infectious inflammations in the lingual tonsils. I cannot recall a single example in my experience in which diphtheria has selected that region as a *primary* site and extension thereto is almost unknown. In the case of diphtheria the membrane is seen to pass from the palatine tonsil by the faucial pillars to the sides of the epiglottis and to creep round by the aryepiglottic folds into the larynx. As to scarlet fever, many cases may commence in the lingual tonsil and extend to the palatine but I have not seen the reverse process when the palatine tonsils are the first to be attacked. Again as I have witnessed it, syphilitic manifestations in the lingual tonsil are not common. It is surely not unreasonable to suggest that the comparative immunity to coccidial and bacillary infection enjoyed by the lingual tonsil is due to the greater flushing of this region by the abundant secretion of the mucous and albuminous glands.

The intense pain which is sometimes experienced in acute inflammatory conditions of the fourth tonsil is referable to direct

stimulation of the glosso-pharyngeal nerve, whilst laryngeal symptoms common to chronic hypertrophy may be explained by reflex irritation of fibres of the superior laryngeal nerve distributed to this area. In the close intimacy of the lingual tonsil with the muscular tissue of the lingualis—the essential muscle of the tongue—may be explained the impaired mobility of the organ when the lingual tonsil is acutely inflamed. It is not indeed at all straining the situation, to point out that this muscular bed of the lingual tonsil differs considerably from the dense fascia on which the palatine tonsils rest; and likewise from the osseous character of the greater part of the tissue underlying the pharyngeal tonsil.

A reference to the plates of Sappey enables us to appreciate the greater liability to concomitant adenopathy in inflammations of the lingual tonsil than is generally seen with the palatine and in the dense character of the cellular tissue, the comparative rarity of extension of morbid processes beyond the lingual tonsil itself.

Lastly, not to carry this point too far, may not the superficial and plentiful arrangement of the venous plexus at the base of the tongue account for the tendency to chronic hypertrophy and engorgement as a result of vocal abuse, for I do not think that either Holbrook Curtis, or any one else who has written on this subject, has pointed out that chronic hypertrophy of this region, so common in singers and orators, is found for the most part in those who improperly use or abuse the voice.

Vernèuil's statement that there is a deep as well as a superficial varix of the veins at the base of the tongue, and the anatomical observations of Zuckerkandl and Foucher, that the lingual nerve is accompanied by a satellite vein, are of importance in relation to varix as a cause of paraesthesia, glossodynia and other neuroses in this region.

Although not strictly within the scope of this short communication it may be of interest to the fellows of this Association to learn that so far from varix in this situation having been first written about and the condition described as one of "throat hemorrhoids" by so humble a person as myself, the subject was deemed worthy of clinical remark and even the term "hemorrhoids" employed so early as the fourth year of Practical Laryngoscopy by one of its first and most distinguished pioneers—G. Lewin of Berlin. At page 257 of his *Klinik der Krankheiten des Kehlkopfes* published in 1863 we find the following:

"*Pharyngitis varicosa*. This disease may cause bleeding. I may mention here the case of Dr. B. He suffered for many years

from blood-stained sputum, with and without cough. He had consulted authorities of several universities. Finally he sent to Geheimrat Frerichs, who suspected the real source of the hemorrhage, and addressed the patient to me. I found on examining him with the laryngoscope an injection of the mucous membrane of the lower posterior wall of the pharynx; this place was occupied also by some small varicose veins, which went in the direction of the larynx and esophagus. These varicose veins showed traces of recent bleeding.

"I may mention other cases, in men as well as in women, who seemed to be affected with general plethora, and who said the cause of their trouble was 'hidden hemorrhoids' (*Versteckte Hämorrhoiden*). I found in the throat the following state: From the insertion of the epiglottis to the middle of the tongue, a number of injected, blue-reddish, elevated veins were seen, which crossed the circumvallate papillæ. Some veins were found near the margin of the tongue, giving off small branches, which terminated in small points, of enlarged veins, the size of a pinhead, the whole thing looking like 'grapes'. A number of these patients suffered from blood-spitting.

"In some of these cases I saw in the fossa navicularis laryngis, parallel to the 'plica crico-pharyngea', a bluish-red vein, as thick as a crow-quill. All these persons were healthy, except that they suffered from abdominal and hepatic plethora and their throat troubles".

These last, in 1865, Lewin more fully described as "sensations of scraping, burning, and dryness in the pharynx" (*Kratzen, Brennen, Trockenheit*).

Attached to this paper I send a facsimile reproduction of Lewin's somewhat conventional illustration of this condition as he witnessed it in the tongue.

Lastly I would say a word on the anatomical relations of a troublesome affection of the tongue—the imaginary ulcer—which it is true may arise from hypertrophy and varix of the lingual tonsil, but is quite as often due to slight mischief in another situation.

It is known that the taste buds chiefly occur in the circumvallate papillæ. They are also to be found in the irregular nodular elevations constituting the lingual tonsils. But they also exist in the "fimbriæ linguæ", two rough patches, which are seen on each side of the tongue just in front of the anterior faucial pillars—the mucous folds from which to the tongue, lax when the organ is at rest,

form the palato-glossal folds when it is protruded. Now these patches correspond morphologically with the "papillæ foliæ" of the rabbit and it is only in accordance with our general knowledge of vestigial elements, that this site should be prone to pathological processes.

The Diagnosis between Tubercular Syphilis of the Tongue and Syphilitic Glossitis—PINI—*Ann. des Dermatologie et de Syphiligraphie*, October, 1898.

Tubercular syphilis of the tongue:

1. Begins in the submucous connective tissue, which corresponds to the *rete mucosum* of the skin.
2. Spreads from the center towards the surface, deforming and atrophying the papillæ.
3. Profoundly deranges the disposition of the elastic fibers and of the muscular elements, which disappear, leaving no trace.
4. Has clearly defined limits.
5. Has an origin, a structure and an anatomical seat which do not differ from those of cutaneous tubercle.
6. Shows no tendency to the formation of giant cells.
7. Presents vascular alterations consisting of proliferation and detachment of the endothelium and infiltration of the external tunic without evident traces of an endarteritis.

Syphilitic glossitis on the other hand:

1. Has a point of departure notably deeper and more exactly in the muscular parenchyma.
2. Has no defined limits, and easily invades the entire organ.
3. Presents an exuberance of the mucous epithelium, which sends irregular processes into the corium.
4. Consists in its inflammatory process of the same morphologic elements as tubercular syphilis, with giant cells in addition.
5. Shows evident new formation of connective tissue.
6. Comprises a newly formed connective tissue of intricate disposition, which imparts a very considerable resistance to the organ.
7. Produces deformity, *c. g.*, lobulation or fissures of the surface, resulting either from loss of substance by ulceration or from contraction of the newly-formed connective tissue.

SCHEPPEGRELL.

A CASE OF DIPHTHERIA OF THE FLOOR OF THE MOUTH.

BY J. L. GOODALE, A.M., M.D.

Assistant Physician for Diseases of the Throat in the Massachusetts General Hospital and in the Boston Children's Hospital.

Isolated diphtheria of the mouth is a sufficiently rare condition as to deserve more than a passing notice. In the following case, which came under my observation, the diagnosis was established by microscopical examination of a portion of excised tissue:

The patient was a female, thirty-six years of age, married, with negative previous history. *Present illness.* Last evening while in her usual good health, she noticed a gradually increasing thickness of speech, together with a swelling of the floor of the mouth, coming on without apparent cause, and attended by marked salivation. Swallowing became almost impossible. Movements of the tongue were difficult, but not painful.

Examination twelve hours after onset of the symptoms showed the patient to be a fairly well developed woman in apparently good health, except for the lesions within the mouth. The floor of the mouth exhibited a marked diffuse swelling of soft elastic consistence. On either side, a fold of membrane running antero-posteriorly appeared as a reddened prominent ridge, on a level with the top of the inferior incisors, firm and elastic in consistence, translucent except on the anterior margin and extreme summit, which was covered with a white exudate. This exudate on close inspection was seen to consist of a fine delicate tracery of white lines, roughly parallel to each other, arranged in undulating waves and in places aggregated to form white opaque areas.

Moderate salivation was present. No foul odor was apparent beyond that which might naturally proceed from several carious teeth. The gums were reddened, moderately spongy and swollen. The glands below the jaw were moderately enlarged but not tender. The general condition of the patient was not affected.

Under a simple cleansing mouthwash the conditions rapidly improved, the exudate disappearing in three days and the floor of the mouth appearing normal at the end of a week.

MICROSCOPICAL EXAMINATION.

A wedge-shaped piece was excised from the summit of the ridge

at a point covered macroscopically with a white exudate. Alcohol hardening. Sections stained in hæmatoxylin and eosin showed the epithelial cells to be widely separated from each other by the penetration between them of great numbers of leucocytes and an abundant mass of a mesh-like exudate. In places these epithelial cells are exfoliated in coherent masses. In most places the individual epithelial cells exhibit no change in their protoplasm or nuclei, but here and there where a few are surrounded by an especially large mass of exudate and leucocytes their nuclei stain faintly or not at all. The submucous connective tissue is scarcely to be perceived, its place being occupied chiefly by numerous leucocytes and masses of exudate. The leucocytes are less abundant than in the mucous membrane. Except for their wide separation from each other the individual fibres show no abnormality. A considerable number of red blood corpuscles are seen intermingled with the leucocytes in the meshes of the exudate.

On staining by Weigert, the exudate is found to consist of fibrin. This is chiefly found in the deeper portions of the mucous membrane, where it is spread out in a well-defined fairly even line from which finer prolongations are given off to the surface and to the submucous tissue. There is also seen a separate fibrinous mesh diffused throughout the deeper layers of the submucosa, increasing in density with the depth.

Examination of sections stained in polychrome methylene blue and eosin show that the leucocytes above referred to, consist of small mononuclear and ordinary fine granular polynuclear cells in about equal proportion, together with a considerable number of eosinophiles. The relative proportion of these cells is about equal throughout the specimen. There are no cells found resembling plasma cells or mastzellen.

In specimens stained with Loeffler's alkaline methylene blue, a considerable number of bacilli are found, evenly dispersed throughout the region of the fibrinous exudate. These bacilli have the characters of bacilli of diphtheria, appearing as small, short, straight or slightly curved rods, from two to three times longer than broad, with rounded ends, and often staining unevenly throughout their length. They decolorize by Gram.

A few cocci in pairs and short chains, staining by Gram, are found lying upon the mucous membrane, but not below the surface of the fibrinous exudate.

THE PHONENDOSCOPE AS A TEST FOR SIMULATED DEAFNESS.

BY JOHN A. THOMPSON, M.D., CINCINNATI, OHIO.

I was asked recently to examine a man, who claimed as a result of an injury, that he was totally deaf in the right ear. Inspection of the ear showed only the changes common to catarrhal otitis media. The tuning fork was heard readily, by bone and air conduction, by the left ear. He denied positively, that he could hear any sound from the fork in the right ear.

I put the tubes of the phonendoscope in his ears and touched the tympanum of the instrument with the handle of the vibrating fork. The sound was heard very distinctly on the left side only, according to the patient's statement. I held the instrument below the patient's chin, where he could not see it. I then attracted his attention to the fork by changing the clamps on it. At the same time, with the thumb and finger of the left hand I detached the tube from the phonendoscope, that connected it with the left ear. When the handle of the vibrating fork was again touched to the tympanum of the instrument it was immediately heard and the difference of pitch appreciated.

It was thus demonstrated that the deafness was simulated. The tube remained in the left ear, thus allaying the patient's suspicions. As the instrument was not connected with the ear claimed to be healthy, no sound could be transmitted to that side.

Anyone can prove by a test in his own person, that it is impossible to hear the fork in the ear not directly connected with the phonendoscope. This is a simple and effective test for simulated deafness in one ear. The method is superior to any with which I am familiar.

NEW INSTRUMENTS.

A LOOP-FORMER.

BY EMIL AMBERG, M.D., DETROIT, MICH.

If a soft wire is to be used to remove a polyp from the ear, it is important that there be not much resistance at that part of the wire which enters the canula of the polyp snare. When the resistance of the wire at that spot is to be overcome, the instrument frequently makes a slight movement out of place. This means much, when we consider the minuteness of the field of operation.

The accompanying figure (about one-half natural size) shows a pyramidoid-shaped piece of metal, by the aid of which the loop of



soft wire can be formed so that the wire will slide smoothly into the canula.

The sharp edge of the instrument looks toward the opening of the canula.

The conical shape permits loops of different sizes to be formed.

The instrument was made for me by Messrs. Codman & Shurtleff, Boston, Mass.

32 Adams Avenue, West.

CORRESPONDENCE.

PHILADELPHIA, November 15, 1898.

Editors THE LARYNGOSCOPE:

In the November number of *THE LARYNGOSCOPE* is published a letter from Dr. Watson purporting to be an answer to mine published in the September *LARYNGOSCOPE*. Watson repudiates the statement attributed to him that my operation is identical with his. He, however, intimates that it is a modification.

My operation is *not* an extension upwards of the ends of his incision at the crest of a horizontal deviation, but a U-shaped incision, *not in*, but *around* the deviation.

Had not the clear statement of this fact in the original description of my operation and its emphatic reiteration in my September letter been ignored, and the essential feature misstated at least by inference there would have been little ground for controversy.

The cuts Figs. 2 and 3 reproduced by Watson for comparison with his show this difference in the incisions; but Fig. 4, a vertical sagittal section to the right of a deviated septum, ignored by Watson, was designed for the express purpose of showing the exact position and shape of my section: *not* at the crest of the deviation where other operators, as well as Watson, made their sections; but *around* the entire deviated area, thus utilizing as a means of support not the *bevel* of an incision, but the *whole* of the septal *redundancy*, both in a horizontal and vertical direction. In other words, the *whole* deviation is swung into the median line like a trap door upon a spring hinge, the tension of which can often be reduced by manipulation, while this door or flap is locked into its new position not only *below* but in front and behind by all the septal redundancy.

The operation seems so novel and unique that I cannot help feeling that it requires much explanation, a vivid imagination and some assurance to assume that it is merely a modification of an operation at the crest of a septal deviation.

Watson claims priority in what he terms the "essential feature" or of my operation which he states he "devised and described," *i. e.*, made a straight incision at the apex of a septal deviation and caused the upper to hook over the lower immovable flap. Watson states in his description of his operation that "where the deviation is marked and down, it is impossible to bring the lower fragment into line."

From this it logically follows that every operator who made an incision through the crest of such a deviation must have hooked the upper or movable fragment over the lower. A somewhat superficial search through the literature of the subject would indicate Sajous as the first to perform such an operation in 1881.

It is in reference to such septal deviations near the floor of the nose that I remarked the resemblance of Asch's operation not to Watson's, but to the combination of Ingal's and Watson's. If the vertical portion of the usual crossed incision is prolonged downward below the horizontal into that portion of the septum which Watson states cannot be brought into line, it would be inutile. In each operation the flaps are triangular. As the matter is not germane to this controversy it is of importance only as affording Watson an opportunity to use intemperate expressions as regards a not uncomplimentary allusion: as the Asch operation meets all requirements, both as regards redundancy and resiliency. A simple straight incision does not.

There remains to be considered only what may be called the historical portion of Watson's letter.

The basis for Watson's assertion that as soon as I had read the description of my operation all present who were familiar with his operation gave it as their opinion that in its essential features it was the same as his, rests on the fact that in the discussion Dr. Vansant stated that it was the same and was corrected by the next speaker, Dr. Gibb. I do not recall that anyone else alluded to the subject.

The assertion that at a certain medical meeting his operation was definitely brought to my notice rests upon the fact that not at, but after a meeting adjourned for lack of a quorum we had a few moments conversation as regards our methods of dealing with septal deviations. I am not aware that I received any new or useful information as I was then doing a modified Seiler operation at or below the crest of the deviation, nor was I aware that Watson had an operation that he considered original. When after my paper was in print I was first made aware of the nature of Watson's claims to originality, I made every effort that my foot note should express not *my* but *his* exact views on the subject. This I did from the very natural desire to give a colleague as much or more credit than was due, the wish to avoid all controversy and the fact that it makes no difference as far as my operation is concerned who first made an incision through the crest of a septal deviation and hooked the movable upper flap over the lower. That was decidedly *not* my operation.

After treating Watson's claim with perhaps more than the usual

complacency, professional courtesy and gentlemanly consideration, my amazement was great when I became aware that an attempt was apparently being made to appropriate my operation. Under the circumstances the best thing to do seemed to write a paper for the *Philadelphia Polyclinic*, the journal of an institution with which Watson is connected, and clearly state the differences between his operation and mine and also compare his claim to originality with quotations from Cohen, Sajous and Roberts. This paper was published August 20th, one month before the date of Dr. Watson's letter to THE LARYNGOSCOPE. A reprint was sent Dr. Watson.

It is apparent that the history of the operations can have but a remote bearing upon the controversy which it will be seen I made considerable effort to avoid: but this history as stated by Watson and corrected by me may serve the useful purpose of explaining how, without ulterior motives, so able a man assumed a position which seems not easily tenable.

The following is Watson's description of his operation, italics and explanatory note are mine:

"In many cases, especially where the deviation is marked and low down, it is impossible to bring the lower fragment into line. The result is that there is nothing to meet the upper fragment and non-union results. To overcome this difficulty, I have devised the following *modification* of the operation*: Instead of cutting out an elliptical piece along the horizontal line, I make an incision, which may be called a bevelled incision. The edge of the knife is directed upward and toward the opposite side, and carried through the cartilage, but not the mucous membrane of the opposite side. The incision is made *just at the crest of the deviation*. Any vertical deviation is cut out, as before described. The upper portion is then pressed over toward the other side, where it hooks itself on the lower, and is thus held in place."

E. B. GLEASON, M.D.

*Ingals, previously described.

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THE LARYNGOSCOPE.

3702 Olive Street, St. Louis, Mo., U. S. A.

EDITORIAL.

FOURTH ANNUAL MEETING OF THE WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION.

CARNIVAL MEETING.

The fourth annual meeting of the Western Ophthalmologic and Oto-Laryngologic Association will be held at New Orleans, February 10 and 11, 1899, these dates being selected in order to give the visiting members an opportunity to see New Orleans during the celebrated Mardi Gras Carnival.

Reduced rates will be issued by the railroads for this occasion.

SCIENTIFIC PROGRAM.

An interesting program is being prepared and will be mailed in due time by the Secretary. A full attendance is confidently expected. Prominent men have been invited to deliver the opening address to the Ophthalmologic and to the Oto-Laryngologic Sections. The meeting will be held at the New Orleans Polyclinic building.

ENTERTAINMENTS.

On Friday evening, February 10, the members are invited to a reception given by Dr. and Mrs. Scheppegrell, and on Saturday evening a number of boxes will be retained at the French Opera House for the members and the ladies who accompany them. On Monday and Tuesday the carnival processions will be seen. Convenient places for observing these will be furnished by the Arrangement Committee. The Rex Carnival Ball will take place Tuesday evening, invitations for which may be obtained by members applying to Dr. Scheppegrell, Chairman of the Arrangement Committee, New Orleans, before January 15th. The Arrangement Committee will also provide members with cards for the various clubs of New Orleans.

PRELIMINARY PROGRAM OF THE OTO-LARYNGOLOGIC SECTION.

Dr. Charles E. Sajous, of Philadelphia, will give the address before the Section. The subject for discussion is the "Diagnosis and Treatment of Incipient Laryngeal Cancer," the discussion being opened on "the diagnosis" by H. W. Loeb and S. S. Bishop; on "the treatment" by Wm. Scheppegrell and George Knapp.

Papers will be read by: Drs. Thomas F. Rumbold, St. Louis, Mo.; Hamilton Stillson, Seattle, Wash.; M. A. Goldstein, St. Louis, Mo.; W. L. Dayton, Lincoln, Neb.; E. C. Ellett, Memphis, Tenn.; K. K. Wheelock, Fort Wayne, Ind.; S. S. Bishop, Chicago, Ill.; George Knapp, Vincennes, Ind.; Augustus McShane, New Orleans, La.; Wm. Scheppegrell, New Orleans, La.; D. Milton Greene, Grand Rapids, Mich.; W. L. Ballenger, Chicago; N. H. Pierce, Chicago; Hal Foster, Kansas City; W. T. Grove, Eureka, Kan.; Fayette C. Ewing, St. Louis, Mo.; Edwin Pynchon, Chicago.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, November 23, 1898.

Jonathan Wright, M.D., Chairman.

Recurrent Laryngeal Paralysis.

Dr. C. G. Coakley reported a case of recurrent laryngeal paralysis with autopsy. The patient was a man, sixty-two years of age, who first came under observation of Dr. Oppenheimer last October, complaining of shortness of breath and aphonia. Examination showed paralysis of the left recurrent laryngeal nerve. Careful inspection of the chest failed to reveal any cause for this paralysis. At this time there was an extensive emphysema of both lungs. The apex beat of the heart was about two inches below the xiphoid cartilage. The speaker said that as the dyspnea was rapidly increasing the man had been advised to go to the hospital. He entered the Columbus Hospital on November 9, but died suddenly the same night. A few days before this dysphagia had developed. The autopsy revealed a tumor, which was situated directly behind the junction on the left clavicle with the sternum. This tumor had sloughed and had opened into the esophagus. The lungs appeared to be normal. The trachea was considerably pressed, and this accounted for the dyspnea. Examination of the growth showed it to be a carcinoma. The pathologist thought the growth occupied the lower part of the thyroid.

Dr. J. W. Gleitsmann said that he had presented to this academy a man with an enormous aneurism of the aorta and a recurrent paralysis. The history at the time was not complete, but the case was one of great interest. Subsequent search of the records of the German Hospital showed that he had seen this patient first in 1894. According to the records, the paralysis at that time was not one of the recurrent nerve, but an abductor paralysis. When pressure was first made on the nerve the abductor fibers were affected, but subsequently the whole nerve became so injured as to lose its function, and then the recurrent paralysis appeared.

Dr. R. C. Myles remarked that a very interesting feature of the specimen was the atrophy of the cord and of the muscles behind it from non-use.

Dr. Jonathan Wright said that the discussion of this subject had been recently reopened in one of the German journals. Two or three weeks ago he had seen a man of about sixty years who gave a history of increasing dyspnea for several months, and of a hacking, distressing cough for two years previously. During this time there had been occasional and sudden attacks of hoarseness lasting for a day or two. He was to all appearances a healthy man. There was no paralysis of the cord, but the right one did not move as promptly as did the other. Dr. Wright believed there was an aneurism of the innominate artery, which was pressing on one of the bronchi. The paralysis was just beginning and was intermittent. The speaker said that in many of these cases of growth in the chest one found an antecedent history of occasional attacks of hoarseness and of spasmodic dyspnea.

The Abuse of the Electric Caутery in the Nose.

Dr. H. Holbrook Curtis read a paper with this title. Two cases were reported in the paper to show what a distressing condition is sometimes left after cauterization of the nasal septum. For complete paper see *The Laryngoscope*, January, 1899, page 32.

Dr. Myles said that he had never seen much necessity for the use of the thermo-cautery on the cartilaginous septum. He had attempted once to control hemorrhage here by this means, but it had failed utterly, and he had not used it since for that purpose. The electric cautery he had used quite extensively on the tubercle of the nasal septum. A sharp and very delicate electric knife should be selected. In his own experience there had not been any serious effects from this practice. He never used the electric cautery along the inferior turbinal except with the greatest caution because of the danger of cerebral inflammation. The use of the electric cautery on decidedly hypertrophic tissue seemed to be far more effective than the use of acid. There should be little or no after-effect from the electric cautery, provided the adjacent tissues were not roasted. Most of the bad effects observed arose from the use of too large electrodes and from their improper application. About ten years ago when he was using the electric cautery quite extensively on the posterior tip of the inferior turbinal he had had two cases of acute otitis media as a result. Since that time he had used the electric cautery snare upon which strong traction had been made before the current was turned on.

Dr. Gleitsmann said that he used the galvano-cautery on the septum in the same manner as had been described by Dr. Myles. He had the records of a series of cases in which patients complained of spasmodic sneezing only, and in which he had arrested it in fully four out of six by cauterization of that portion of the septum opposite the middle turbinate. In doing this the septum was cocaineized thoroughly and the galvano-cautery point used, taking care not to touch the turbinate. He took every precaution to avoid the formation of adhesions. Regarding the application of the galvano-cautery to the inferior turbinate, he said that he applied the galvano-cautery regularly to hypertrophies of the inferior turbinate, and, after making a groove in this way, he made an application of trichloroacetic acid. The patient was directed to use a spray of boric acid solution containing cocaine in the strength of one part to one thousand of the solution, and there were no unpleasant after-effects.

Dr. W. K. Simpson said that in speaking of cauterization of the turbinated tissue we were dealing with one of the most valuable methods of treating hypertrophy of the turbinates. Meningitis and similar inflammatory accidents might just as well follow cauterization with acids as with the galvano-cautery. If properly used, the galvano-cautery applied to the turbinated tissue seemed to him a most valuable method of treatment, but, like other methods, it must be employed with care, judgment and knowledge. No one would think of using it in the reduction of extensive deformities of the septum, but there were certainly conditions of the septum in which the galvano-cautery could be used with excellent results. He called attention to quite a common edematous condition of the nasal septum, situated rather high up, which proved to be a potent cause of sneezing in the various types of rhinitis. He had seen cures follow the destruction of this tissue by means of the galvano-cautery. Personally, he had never seen any untoward symptoms follow the use of this form of cauterization. He believed, with Dr. Myles, that the operator must clearly keep in view the exact object to be attained, and that only the finer points should be employed so that merely a deep groove is made.

Dr. Clarence C. Rice said that a word of warning might well be said against all methods of destroying the nasal tissues, but he would not agree with the reader of the paper regarding the use of the galvano-cautery. He used this form of cautery daily. Applied at a low red heat to a small spur on the septum it reduces the spur without exciting any inflammation. The galvano-cautery should

not be used at such a high heat as to scorch the opposite tissue. It takes the place of the saw and trephine in a great many instances. He deprecated the extensive use of the galvano-cautery on the cartilaginous septum because of the danger of devitalizing this tissue. The galvano-cautery was appropriate for the reduction of innumerable small hypertrophies, and did not cause the troublesome bleeding which follows the knife or saw. He did not use acids much on the turbinated tissues, but he did use the cautery to reduce the inferior turbinate. Just a small puncture here would produce a very satisfactory contraction, and give a much better result than he could obtain by the application of acids.

Dr. Wolf Freudenthal said that he did not employ the galvano-cautery very much, chiefly for two reasons. One of these was that he did not see as many hypertrophies now as formerly; the other was that some years ago when he was engaged in studying the quantity of moisture given up by the nose he had found that those noses which had been cauterized did not give off more than half the normal quantity of moisture.

Dr. Emil Mayer said that when we tear down we should always be ready to furnish something better, and he believed that we had something better than the galvano-cautery.

He alluded to the suggestions made at various times by Dr. Delavan. This consisted of a puncture of the mucous membrane of the turbinates with a needle knife and scraping the periosteum underneath. In addition to this method of treatment the introduction of the platinum needle and the use of a galvanic current of $1\frac{1}{2}$ milliamperes was exceedingly valuable. He had come to regard the use of the galvano-cautery as being fraught with much danger, and would go so far as to say that it should never be used on the septum when other methods might be employed.

The statement has been made that the cautery is preferable because so much bleeding occurs with the saw or trephine. This is not the case if one makes use of the suprarenal extract before operating. This remedy makes the parts absolutely bloodless.

Dr. O. B. Douglas said that he had discarded the cautery absolutely because the results had not been satisfactory, and there were, in his opinion, better methods. In a paper read before this section ten or more years ago he had advocated the cautery, having been the first person to use the dynamo current for this purpose, but for the last three years he had not employed it at all.

Dr. M. D. Lederman said that the principal objection to the use of the cautery was evidently the destruction of the mucous mem-

brane. If this were the case, why not make the punctures submucoid? The disadvantage in the use of the galvano-cautery was the reaction: however, the method suggested by Dr. Gleitsmann seemed to him to do away with this in great part. The tendency, on looking into the nose and seeing a scab, was to attempt to remove the scab. If, on the other hand, the scab were allowed to remain for five or six days it would come away almost without assistance, and the wound would be found to have nearly healed underneath, even in cases in which a very large slough was left after the cauterization. Of course, in some cases there were idiosyncrasies, leading to excessive reaction.

Dr. J. E. Newcomb said that he thought the note of warning sounded by the reader of the paper was most timely, for it was not uncommon for patients to come in and ask to have the nose burned out, yet examination would show that this was just what was not required. After hearing Dr. Swain's paper last May on the use of the suprarenal extract he had himself made use of the same. This preparation is neither antiseptic nor anesthetic, and must, of course, in operative work, be used in alternation with cocaine. Dr. James Ewing had recently expressed the opinion that protonuclein and similar bodies would probably be found to have the same effect on engorged tissues as the suprarenal extract. Personally, he had never used the cautery upon the septum. In cauterizing the turbinate bones he had followed practically the method mentioned by Dr. Gleitsmann. Deeper pressure should be made at the first and last parts of the application. He also insisted that the patient should wear a little tuft of antiseptic cotton in the nostril for a few days, especially when out of doors. Regarding the sensation which people have of not getting enough air through the nose, the speaker said that he believed that there was such a thing as subjective dyspnea—a sensation of lack of air without proportionate mechanical obstruction. This matter had been treated of in a paper by the chairman. In one case in which he had used the cautery there had been adhesions. He would like to hear regarding the comparative danger of adhesions from the use of the galvano-cautery and the application of chromic acid.

Dr. Wright said that he used the cautery without hesitation wherever he found vascular hypertrophy. He would not think it advisable to use it for destroying cartilage. Lately he had used it on the mucous membrane of the septum several times, and posteriorly high up where there were large vascular swellings. It could be done without any pain and with good result. So far as

he knew, the cautery had been used for a very long time for the destruction of vascular tissue, and probably would continue to be used for this purpose for a long time to come.

Dr. Curtis, in closing the discussion, said that an important fact to be borne in mind was that unless our attention were called to the possible danger of such practice we were apt to overlook it. When the patient returned long after the use of the thermo-cautery one was not apt to think that the dry rhinitis present was the result of this cauterization; moreover, it was not improbable that the patient would go to some other practitioner, and hence the physician's attention would not be directed to the serious effects that he had produced. Since he had been looking for and studying this dry scabby condition of the nose, he had found it almost invariably a sequela of such treatment. He saw no reason why the thermo-cautery should be dangerous in vascular tissue unless the meninges approximated the part so treated. There had certainly been enough fatalities from such treatment to justify physicians in being exceedingly cautious. Since last spring he had tried the suprarenal extract, and had found that the tissues were blanched and operations rendered almost bloodless. It was true that the turbinate bodies might be blanched by a great many things—even a pledget of cotton moistened with water—but such an action was ordinarily exceedingly evanescent. He was of the opinion that the inferior turbinate, especially posteriorly, was more scientifically treated by the injection with a syringe of monochloroacetic acid. The making of a longitudinal burn and afterward filling it with acid did not seem to him at all necessary.

Nasal Catarrh in Children : Its Cause and Treatment.

Dr. Clarence C. Rice read this paper. He said that some writers lay much stress upon the influence of heredity, but it should be remembered in this connection that sickly and rachitic children who have adenoids come to the general practitioner, while the robust children are more apt to come to the rhinologist. It was convenient to divide the catarrhal conditions found in children into acute and chronic: and still further into simple catarrhal and purulent; and, again, into hypertrophic and atrophic. Many acute coryzas in children are simply symptomatic of pathological conditions in the nose or pharynx. He believed that in almost 80 per cent. of cases of chronic nasal discharge occurring in children the chief cause was the presence of some degree of enlargement of the post-nasal or pharyngeal tonsil, which might or might not be accompanied by

enlargement of the faucial tonsils. Only a very small amount of adenoid hypertrophy was necessary to produce chronic catarrh in young patients, because of the narrowness of the space. Purulent rhinitis in children, according to Dr. Bosworth, is a frequent disease, terminating eventually in atrophic rhinitis. The significant symptom, according to this same authority, was a bright yellow discharge of pus from both nostrils, but certainly in his own experience it was rare to meet with such a discharge. He believed the disease was really an atrophic rhinitis from the beginning, and that this affection could be recognized by the condition of the nasal passages. Acute bilateral empyema of the sinuses might be present for a short time after an acute coryza. All acute coryzas are also most amenable to treatment, and the purulent discharge usually ceases when all nasal obstruction has been removed and the passages have been cleansed. He did not recognize deviation of the septum unless the deformity was sufficient to interfere with nasal respiration. Chronic hypertrophic rhinitis, in his opinion, was a comparatively rare affection in children, because in very few persons under twelve years of age was there organized connective tissue hypertrophy of these structures. Many apparent hypertrophies are caused by interference with the nasal circulation and disappear as soon as the real cause of nasal respiration is removed. He had rarely found spurs on the nasal septum sufficiently prominent in children under twelve years of age to require treatment. Nasopharyngeal catarrh does not appear in children except as a symptom of the enlargement of the pharyngeal tonsil. Acute inflammations of the maxillary sinuses occurred more frequently than had been supposed, and were more commonly bilateral in children—the reverse of what it is in adults. Atrophic rhinitis was by no means an uncommon affection in children, being present in some degree in about 10 per cent. of children suffering from nasal disease over five or six years of age. In these cases the nostrils are too roomy and there is a tendency towards the formation of crusts from the diminished moisture. In the majority of instances there seemed to be from the very beginning a special predisposition to atrophy. The same conditions in one child might produce a hypertrophic process and in another an atrophic one. Atrophic rhinitis is much more commonly observed in the poorer classes than among the well-to-do. There are many cases of atrophic rhinitis which might be prevented or aborted by earlier attention. Ozena seemed to him only a name for a condition which might accompany many pathological states. If ozena were a special disease, always producing

characteristic pathological changes, it had not yet been clearly recognized. He believed enlargement of the pharyngeal tonsil was the most common cause of nasal catarrh in children. This adenoid enlargement is common to all classes of children, and is often the result of the acute coryzas accompanying the eruptive fevers. In most cases, if the adenoids were removed by early operation, the hypertrophic changes which seem to exist in the nostrils would disappear and the nasal passages would become normal. It was the imperative duty of the physician to remove enlarged pharyngeal tonsils. After the clearing of the passages the indications were to use simple, non-irritating disinfectant washes, followed by bland powders or oils.

Dr. A. Jacobi said that many infants suffer from nasal catarrh. Adenoids are rarely found in very young children, but nasal catarrh is common and severe. One reason for this great frequency was to be found in the anatomical conditions—the small space in the nose. The nasal cavity in the adult is about two-sevenths of the distance between the eyes, measured externally, whereas in the baby it is only two-ninths. The lower passage hardly exists in the baby, and the middle passage is very narrow, particularly in its anterior part. The septum is more horizontal in the newly born, more vertical in the adult. Accumulations of mucus in that neighborhood are not expelled, or washed out, and hence they give rise to irritation and nasal catarrh. The newly-born baby is desquamating over all of its integuments, both epidermis and mucous membranes: there is a rapid change of the epithelium into mucus. Nasal catarrh is not, as a rule, taken care of because the symptoms are not very urgent. The lymphatics in the baby are more numerous and are larger than in the adult, and hence any irritating material is absorbed very readily. One result of such absorption is, for instance, enlargement of the lymph bodies about the neck. Where there was naso-pharyngeal irritation, for example, the glands adjacent to and below the angle of the jaw swell, just as the lymph-nodes about the neck swell during eczema of the head, the submental because of inflammation of the floor of the mouth, or the inguinal because of an irritation about the external genital organs. According to the theory that adenoids must be scraped out at once, and that they are the primary cause of the irritation of the mucous membrane, these enlarged lymph-nodes should be cut out. But something much better could be done—the removal of the irritation which produced them—provided the lymph-nodes were not too old and had not become hyperplastic. The adenoids are

lymph-nodes, but contain much less connective tissue than the lymph-nodes just referred to. Just as the cleansing of the nose would remove the enlargement of the lymph-nodes externally, unless too old and hyperplastic, so the adenoids, if they had not existed too long, would be removed. He knew of even large adenoids becoming smaller under such treatment, although undoubtedly many adenoids require surgical removal. He wished to emphasize the fact that, in many cases, adenoids are not the cause, but the result of the nasal catarrh. The rhinitis was often the primary affection, and existed for years before the development of the adenoids. The latter are not common in children of two or three years of age, and common in children of eight or ten years. Even after surgical removal of the adenoids, attention must be given to the persistent and proper cleansing of the nasal passages. It was his rule to insist upon having babies' noses irrigated once daily with warm salt water, even in the entire absence of symptoms of nasal catarrh. The nose should be washed on the inside just as regularly as it is on the outside. Another reason for insisting upon this cleansing process was that the little ones are constantly putting their soiled fingers and all sorts of foreign bodies into the nostril. That is why all sorts of pathogenous and non-pathogenous microbes are found in the healthy as in the diseased nares. Dangers will arise from the presence of these microbes as soon as the mucous membrane is sore, the epithelium thrown off or injured, and absorption either of microbes or their toxins becomes possible. Here is the connection with all sorts of meningitis. It was very exceptional for children over ten years of age to have meningitis: on the other hand, the various forms of meningitis were most frequent between two and five years of age, or just at that period when the child was crawling around the floor and most apt to introduce all sorts of germs into the nasal passages.

Dr. Henry D. Chapin said that in older children he had found marked adenoid hypertrophy at the vault of the pharynx, and for the reasons mentioned by the last speaker. In children of four or five years, with more or less persistent nasal catarrh, he had found marked hypertrophy of the adenoid tissue almost without exception, and irrigation did not seem to be adequate to cure the condition. Sometimes a small amount of hypertrophy would cause great disturbance, so that these children would be constantly developing acute coryza. It was his practice to prescribe for these children irrigations with albolene, and if this were not sufficient, he scraped away the adenoid growth. When there was slight hypertrophy at

the vault of the pharynx there would often be a persistent and most troublesome cough at night. The ring of adenoid tissue around the opening of the food passage was very marked in children, and was possibly put there by nature as a safeguard against the introduction into the system of noxious germs with the food.

Dr. J. H. Fruitnight said that the treatment of nasal catarrh should be instituted long before the development of the adenoids. He had also made it a practice to advise that the nasal passages of little children should be subjected to a daily toilet. If the nasal passages were kept clear in this manner, Dr. Caillé had shown that the liability to diphtheritic infection would be diminished. Constitutional conditions certainly aggravate and predispose to nasal catarrh. He doubted if there had ever existed a case of rachitis in which a catarrh had not existed at some time or other. The same remark was applicable to cases of tubercular or syphilitic infection.

Dr. Walter Lester Carr said that it was difficult to obtain exact statistics in a condition so common as nasal catarrh, and for the reasons suggested in the paper. The general constitutional condition of the patient should not be overlooked in the treatment even though it might not be regarded as the chief etiological factor. In all of the eruptive diseases care should be taken that the nasal passages are kept clean, and it should be borne in mind that the mucous membranes are very prone to congestion in childhood, especially if the skin is not active. In a case of catarrh, whether acute or chronic, it was wise to examine for enlarged adenoids. He had rarely met with the purulent rhinitis described by Dr. Bosworth, and one such case he had seen had proved exceedingly obstinate to treatment, yielding only to the internal use of creasote.

Dr. O. B. Douglas said that he wished the author of the paper had laid more emphasis on the far-reaching results of the common neglect of nasal catarrh in children, and also regarding the care necessary in making the proper irrigations. The irrigations should be made with normal salt solution which has been sterilized by boiling. It seemed to him that a very large percentage of catarrhal troubles of adult life are but the inheritance of childhood.

Dr. W. K. Simpson expressed his thanks to Dr. Jacobi for his lucid description of the mode in which nasal catarrh originates in infants and how it gains a foothold. While undoubtedly the causes to which he referred do exist, there is a chronic condition which confronts the rhinologist—a stage in which the adenoids and the nasal spurs and the enlarged tonsils, which are the result of the first nasal catarrh, become, in effect, the cause of the continu-

ance of the catarrh. If in the various exanthemata the nasal passages are properly treated there is not likely to be any subsequent nasal catarrh as a result of these diseases. He was one of those who believe that the period of dentition is exceedingly liable to be followed by the development of nasal catarrh. He looked upon dentition as one of the critical periods of life. Bad hygiene was perhaps the most common cause of nasal catarrh. Constipation was another frequent cause. He did not believe that atrophic rhinitis in children followed hypertrophic rhinitis as commonly as some writers seem to think, it only for the reason that hypertrophic rhinitis being so common, it could not possibly pass into the atrophic form without being more frequently observed. He was of the opinion that the nose could be washed out perfectly without much danger of causing inflammation of the ear. In older children the spraying of the parts with a very weak solution of cocaine prior to the irrigation would prevent the irritation which always follows the use of any solution, no matter how bland.

Dr. Wendell C. Phillips said that the nasal catarrh in children did not differ from that found in adults except in degree. It would be found almost invariably that one or both parents, or children having adenoids, have also suffered from the same condition, so that at least there seemed to be an inherited tendency. Much could be done in his opinion in the way of prevention of catarrh in children by educating them to become accustomed to sudden changes in the weather—they should be taught to "rough it" and not be coddled. He believed, with the reader of the paper, that naso-pharyngeal adenoids are much more common than enlargement of the faucial tonsils. He was not yet prepared to accept the statement that adenoids were caused by the catarrhs of young children, and very gravely doubted if the theory would hold true. The statement was often made, that adenoids are not seen in children until the eighth or tenth year, but this was not true: adenoid development was observed even in young infants. He had himself removed a considerable portion of adenoid tissue in a baby of four months because of a purulent discharge from the ear. This had effected a complete cure of the ear disease without further treatment.

Dr. Chapin said that he must dissent from the use of cocaine, even in weak solution, because these little ones are especially susceptible to poisoning by this drug.

Dr. A. Jacobi said that he had not intended to say that every adenoid must be the result of nasal catarrh. He had also seen adenoids in very young infants, and had removed them.

Dr. Wright said that at the autopsy table he had seen quite marked congenital adenoids. In all of the cases of adenoids that he had examined he had also found a marked apparent hypertrophy of the post-nasal tissue.

Dr. Rice, in closing the discussion, said that although acute nasal catarrhs in very young babies might produce adenoids, nevertheless the persistence of this growth was a very prevalent cause of *chronic* catarrh. He was glad to see such general agreement as to the great prevalence of adenoids. He thought irrigation in cases of adenoids was dangerous because it was liable to excite inflammation of the ear, and was rarely efficacious in cleansing the passages until the enlarged naso-pharyngeal tonsil had been removed.

Notes on an Outbreak of Diphtheria in a Country District—

W. E. STEVENS—*Australasian Med. Gazette*, Vol. xvii, No. 10, Oct. 20, 1898.

The causes of the outbreak in one neighborhood were an old sheep dip, which had not been cleaned out, a woodshed with the accumulation of droppings from several thousand sheep and a privy. In another, a town, the cause was bad drainage. Eighteen cases were treated with serum, all recovered. Of six cases treated without injection, one died before seen; the remainder recovered very slowly, being ill three times as long as those treated with serum.

EATON.

The Treatment of Whooping Cough by the Inhalation of Medicated Oxygen—

LACROIX—*Gazette Hebdomadaire de Méd. et de Chir.*, October, 1898.

This method modifies the attacks of cough, diminishing them both in number and intensity. It obviates complications, such as broncho-pneumonia, hernia, prolapse of the rectum, epistaxis, vomiting, etc. It strengthens the organism, relieving the general condition and placing the organism in good form to resist the invasion of infectious diseases so frequent after whooping cough.

SCHEPPEGRELL.

ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

A Case of Nasal Fibroma—W. E. CASSELLBERRY—*N. Y. Med. Journ.*, November 5, 1898.

Eleven years ago the author removed by repeated sittings, by means of the electro-cautery steel-wire snare, a tumor which occupied the whole left nostril. The primary attachment extended along the horizontal plate of the ethmoidal bone, and included that part of the ethmoid which contains the cells and from which project the middle turbinated bone. The latter had disappeared by absorption, and the cells opened by the same process into the general nasal cavities. Since the operation the patient has been without recurrence. A microscopic examination proved it to be a fibroma.

The article concludes with an interesting résumé of the subject.

SCHIEFFELGRILL.

Deafness and Nasal Disease—Editorial *Kansas Med. Journ.*, Vol. x, No. 45, Nov. 5, 1898.

A review of the present opinions in vogue.

EATON.

II. MOUTH AND NASO-PHARYNX.

Report of a Death immediately following an Operation for Naso-Pharyngeal Adenoids under Chloroform—F. W. HINKEL—*New York Med. Journ.*, October 29, 1898.

A boy of six years was operated on for naso-pharyngeal adenoids, chloroform being used as an anesthetic. A very slight cardiac systolic murmur, loudest at the base, was noticed, but it was not considered due to an organic lesion, its presence being not uncommon in debilitated children. There was much delay from the vomiting of undigested food which had been taken by the patient at a light breakfast nearly five or six hours before. Respiration was interrupted a number of times by spasms of the glottis, partial recovery from the anesthesia occurred and quite a length of time elapsed before the patient was sufficiently relaxed for the operation. About a fluid ounce of chloroform was administered in all. Near the end of the operation the patient suddenly gave a few hurried shallow gasps and respiration ceased. The pulse disappeared and no cardiac pulse could be felt or heard; the pupils were dilated. All efforts of resuscitation failed. No post-mortem was obtained.

The author has collated eighteen cases of death from chloroform narcosis for the removal of naso-pharyngeal adenoids, hypertrophied tonsils, or both.

Paltauf, Kolisko and others have thrown some light upon the cause of the extraordinary mortality under chloroform in this operation. It has been found, post-mortem, in a number of cases of sudden death from slight causes, that there was present hypertrophy of the lymphoid tissue throughout the body, including the tonsils, the lymphoid structures at the root of the tongue, and of the naso-pharyngeal adenoids; the thymus gland was persistent and often very large, and the intestinal follicles were markedly hypertrophied. In addition, there were frequently present a debilitated heart not dependent upon valvular lesions, and at times a narrowing of the aorta with small size of the peripheral vessels. This condition, which has been called *habitus lymphaticus*, was found among others in a number of cases of death during chloroform administration. People so constituted, even though apparently robust, seem to have little power of resistance to comparatively slight shocks.

In commenting on Kolisko's report, Brickner states that it would therefore seem that in anesthetizing patients of lymphatic temperament, or in whom lymphatic enlargements or adenoid vegetations existed, chloroform should be rigidly excluded. Dr. Hinkel offers the following conclusions:

1. Statistics show an exceptionally high mortality from chloroform anesthesia in the operation for the removal of lymphoid hypertrophies of the pharynx.

2. The observations of Viennese pathologists show that sufferers from adenoids frequently belong to an abnormal constitutional type that has been found peculiarly susceptible to chloroform narcosis.

3. In view of the statistical and pathologic data presented, the general use of chloroform in the operation for hypertrophied tonsils or naso-pharyngeal adenoids is inadmissible. SCHEPPEGRELL.

Pharyngeal Mycosis—PRICE BROWN—*Canadian Medical Review*, Vol. vii., No. 4.

In a paper read before the Toronto Medical Society Dr. Price Brown states that he has seen four cases—two were men, aged fifty and thirty years, the other two were women, aged forty and nineteen years. One had suffered from disease of the maxillary antrum, the year previous, but had been cured. The following winter he had been employed in polishing cows horns, the odor of which had been very strong, and after a few weeks his throat commenced to get sore. The suggestion is made that the leptothrix spores were inhaled in the powder from these horns.

A condition of impaired health would appear to be required in order to secure the attachment and growth of the fungus in the pharynx. The author advocates the use of the galvano-cautery as the only method of treatment attended by good results.

GIBB WISHART.

Notes of a Case of Epithelioma of the Pharynx, with Microscopic Specimen—CECIL E. SHAW, M.A., M.D. (Belfast)—
British Med. Jour., October 22, 1898.

Mrs. P., aged thirty, was first seen in May, 1897, on account of difficulty in swallowing, and feeling a lump in her throat.

Ten weeks before the throat began to feel sore, and three weeks before her voice got hoarse, and swallowing became difficult. At no time was there any pain, merely an uncomfortable feeling of something in the throat. She had not lost flesh. On examination the pharynx was seen to be dry and dirty, and with the laryngeal mirror a swelling about the size of a nut was seen in the posterior wall of the pharynx, directly behind the epiglottis, which it touched, and where it touched the top of the swelling was ulcerated. Nothing could be felt outside. A small piece of the edge of the ulcer nipped off with Schrötter's forceps, and examined, proved to be a typical specimen of a reticular epithelioma.

On July 2d she was delivered of a child, which lived three days, and on July 9th she became comatose and died in a few hours.

WATSON WILLIAMS.

Removal of Foreign Body from the Cheek J. M. EIDER *Montreal Medical Journal*, Vol. xxvii, No. 1.

The patient, aged 24, presented a fluctuating tumor high up under the zygoma, at the anterior border of the masseter muscle. A steel pen was removed, the foreign body had been in the cheek for seventeen years.

GIBB WISHART.

Report of a Case of Acute Uvulitis HAI FOSTER *Western Med. Jour.*, Vol. x, No. 10, October, 1898.

A farmer, aged fifty-four, in good health, took a severe cold for which he drank some very hot coffee. He noticed at the time that the throat pained. Several hours later the pain became very severe in the region of the palate, increased, and the voice was lost. On examination the uvula was found to be enormously swollen, elongated, causing constant cough, and there was some suffocation as the tonsils and arches were concealed by the greatly distended uvula. The aphonia was hysterical. After applying a 20 per cent solution of eucaine, a small portion of the uvula was removed by the galvano-cautery snare. The aphonia soon disappeared and he was soon able to talk as usual.

EATON.

The Occurrence of Cartilaginous and Bony Nodules in the Tonsil—HUGH WALSHAM—*Lancet*, Aug. 13, 1898.

In the course of other researches on the tonsil, the author came across scattered masses of cartilage in certain cases, and in others small masses of bone, in the form of trabeculae, rings, and solid nodules. At first he thought that he had to do with an enchondroma of the tonsil—a rare condition, but one that has been described. But, on thinking over the matter, he came to the conclusion that this

supposition was untenable, as the cartilage and bone trabeculæ occurred on both sides. On reflection, it appeared that there was a close analogy between these cartilaginous masses in the tonsils and those small cartilaginous growths which develop in the lines of the branchial clefts, and which are found in the neighborhood of the ear or lower down in the neck, sometimes only on one side, but more rarely symmetrically placed on both, or enclosed in the so-called branchial cysts, and also to the masses of cartilage that are found in the parotid gland.

The tonsil, according to Prof. His,* is developed very early in intra-uterine life—about the fourth month—by a simple folding in of the mucous membrane at a spot situated between the second and third branchial arches, and the remains of which are visible in the adult tonsil as a fold—the plica triangularis. As development proceeds, this primary infolding of the mucous membrane or primary crypt splits up at its base into numerous secondary crypts; and, by the swelling of the meso-blastic tissue lining the invagination, and by the early appearance of lymphoid follicles, the rudimentary tonsil is formed. Remembering, then, the position in which the tonsil is developed, the author thinks we may assume that these cartilaginous nodules are of fetal origin—that is, they are cartilaginous rests derived from the second branchial arch.

In the author's opinion there can be no doubt that the enchondromata that have been described as occurring in the tonsil must have their origin in these cartilaginous rests, which, from some unexplained reason, begin to grow and proliferate. Clinically, it is important to remember that this condition may occur in the tonsil as a congenital peculiarity. The bony trabeculæ, it will be observed, were principally found in persons of advanced age; and, at first, one would be disposed to look upon the presence of bone as a mere senile change; but it was also found to a less extent in the younger persons. It is probable that these centers of ossification may be present from the first, as a small amount of bony material was found in the tonsils of a child, aged two years, observed by Prof. Roth.

Prof. Kanthack, to whom were shown the microscopical specimens, dissents altogether from the above theory. His view is that in these cases there is no embryonic inclusion, but merely a metaplasia of fibrous tissue into bone or cartilage.

There are references to other cases in literature; and the article is illustrated by three sections.

STCLAIR THOMSON.

*"Anatomie der Menschlichen Embryonen, dritte Partie," p. 82.

III. ACCESSORY SINUSES.

Catarrh of the Antrum of Highmore—H. I. JONES—*Pacific Medical-Dental Gazette*, July, 1898.

The majority of cases reported here had been due to external injury or disease of the teeth.

EATON.

Empyema of the Maxillary Antrum—VANSANT—*Phila. Polyclinic*, Nov. 12, 1898.

The author employs the operation of perforating the internal wall, through the inferior meatus of the nose, and introduces a small silver drainage tube, through which antiseptic solutions are syringed, and also escape by the same exit.

LEDERMAN.

Some New Features of the Accessory Cavities of the Nose

ROBERT H. CRAIG—*Lancet*, Aug. 20, 1898.

These notes are worthy of perusal, but they do not lend themselves to abstracting. They represent some of the anatomo-pathological teachings on the subject in the Vienna school.

STCLAIR THOMSON.

IV. LARYNX AND TRACHEA.

Duplicated Vocal Cords—R. FORUS—*Oto-Rhino-Laryng. Soc. Trans. panola*, September, 1898.

A laryngoscopic examination showed a false glottis consisting of a pair of bands of a pale rosy color in the subglottic region, which were united like a fork at the anterior commissure and resembled the true vocal cords. There was no evidence from which to conclude whether the phenomena was congenital or acquired.

SCHLEPFER.

Membranous Tracheitis and Laryngitis without the Presence of Diphtheritic Bacilli—L. A. GRIMES—*Lancet*, Aug. 13, 1898.

A boy, aged four years and nine months, who was recovering from an attack of measles, was admitted on May 18th, 1898, with marked stridor and great sucking in of the episternal notch and of the lower thorax during inspiration. On examination nothing abnormal was found beyond slight injection of the tonsils. The symptoms becoming rapidly worse and the child being in great distress, tracheotomy was performed within half an hour of admission. Immediately the tube was inserted a large piece of membrane was coughed up. This membrane was of a grayish-yellow color, and very tough. Dr. Ewart's method of introducing creasoted oil (one in twenty) into the trachea was at once adopted. Five minims every two hours had the effect of softening the membrane, thus enabling the child to cough it up more easily, and a fit of coughing was usually brought on immediately the oil reached the trachea. After twenty-four hours the dose was altered to ten minims every four hours. In two days the membrane became quite soft and muco-purulent looking. Bacteriological examinations were made by Dr. Slater on the first day and on three other occasions, but, though there were numerous bacilli, that of diphtheria was always absent. The membrane became gradually less from day to day, and the tube was finally removed on the twelfth day. The child made an uninterrupted recovery, and was discharged within the month.

STCLAIR THOMSON.

Laryngectomy—JAMES BELL—*Montreal Medical Journal*, Vol. xxvii, No. 5.

The larynx was removed for epithelioma from a patient aged sixty-five. First symptom, soreness, noticed in September, 1897. The voice became husky in November, and in January, 1898, a warty growth was seen and removed. Preliminary low tracheotomy was performed on February 7, and the removal of the whole larynx, including the epiglottis and cricoid, effected on the 16th of February. Hahn's canula was used, and replaced by a silver tracheotomy tube the following day. The stump of the trachea was drawn well forward and attached to the skin all around—the transverse incision sutured except at either end, through which the pharyngeal portion of the wound was packed with iodoform gauze. A large rubber catheter was fixed in the esophagus by suture, through which the patient was fed for 48 hours, after which it was removed, and the feeding effected easily by a stomach tube introduced by the mouth. Recovery ensued, the only complication being iodoform toxication, evidenced by delirium and pruritus.

The larynx exhibited a roughened nodular ulcerated surface with undermined edges—at the root of the epiglottis—both ventricular bands were involved by lateral extension, the right completely ulcerated through at its center, exposing the ventricle and sacculus. The right vocal cord showed loss of epithelium. There was no glandular involvement.

GIBB WISHART.

Extirpation of the Larynx and Esophagus—GARRÉ—*Munch. Med. Woch.*, May 3, 1898.

The author reports three noteworthy cases. Case 1 occurred in a man, aged 43. The whole larynx was extirpated for malignant disease. The trachea was divided through the first ring, and the larynx was separated from the esophagus. The esophageal wall was left up to the arytenoid cartilages. The hyo-thyroid membrane was divided through, the epiglottis being taken away. The patient made a good recovery, and was free from recurrence two years later. Case 2 was that of a woman, aged 49. Here the larynx and a large piece of the esophagus were removed. The carcinoma started in the gullet and spread into the larynx. The diagnosis was only made possible by a laryngotomy. The patient was free from recurrence four months afterward. Garré referring to the statistics of laryngectomy, says that the improved technique has considerably reduced the death-rate. Death has usually resulted from broncho-pneumonia. This is to be avoided by a careful protection of the trachea and the shutting off of the lumen from possible contamination by secretions. This can be effected by Trendelenburg's tampon cannula or by Hahn's cannula surrounded by a sponge. Prevention of the broncho-pneumonia is also assisted by the closure of the pharynx by suture or a plastic operation. The position of the patient is most important—a horizontal position with inclination of the head backwards allows of the secretions draining away from the trachea.

By attention to these points, the mortality has fallen to 20 per cent. The author appears to think that a splitting open of the larynx is often necessary to the correct and early diagnosis of carcinoma laryngis. Finally, Garré relates a third case with resection of 5 cm. of the esophagus and excision of the larynx and upper five rings of the trachea. He closed in the great defect in the esophagus by means of healthy mucous membrane dissected off the trachea. Somewhat curiously, this mucous membrane did not prove sensitive to the contact of food. When a total transverse division of the esophagus has to be made, the plastic operation becomes more difficult, and various devices have been had recourse to. Garré's patient recovered well from the operation, but unfortunately an early recurrence took place in the glands. STCLAIR THOMSON.

V. EAR.

Epithelioma of the External Ear—F. N. G. STARR—*Canadian Jour. of Med. and Surg.*, Vol. iv, No. 1.

F. N. G. Starr describes the following three cases:

The first, a male, aged fifty-eight. A small pimple appeared ten months ago, which became larger and thicker and in a few months had a raw surface. When seen, nearly a third of the middle of the edge of the helix was involved, the mass extending across the antihelix down into the bottom of the concha. The surface was vascular, ulcerating externally and presenting somewhat everted edges. There was no pain. This was operated upon by a V-shaped incision, carried well down into the bottom of the concha. The continuous horse hair suture was used to bring the thin edges together. There was no sign of recurrence at the end of twelve months.

The second was a male, aged eighty-two. The growth affected the base of the lobule, extending into the bottom of the antihelix and involving the antihagus. There was no pain. The growth was removed, and the lobule sutured to the remaining part of the pinna. Good recovery.

The third was also a male, aged eighty-four. The growth presented at the meatus, about the size of a pigeon's egg, cauliflower-like and fungating. Its apparent origin was in the concha. Pain and tenderness were marked. Operation was refused.

GIBB WISHART.

A Phantom Foreign Body in the Middle Ear—HAROLD GIFFORD—*Western Med. Review*, Vol. iii, No. 10, Oct. 15, 1898.

A boy of three years was brought to the author with the lining of the left auditory meatus lacerated and so swollen that only a glimpse of the bottom of the canal was possible, and with a profuse fetid discharge. The story was that about a week before he

had put two glass beads into his ear. It was thought best to try to improve the condition of the meatus before doing the more radical operation from behind, and it was cleaned with boracic acid and hydrogen peroxide several times a day. A sister then stated that none of the family knew for certain that two beads had been put into the ear, but that the family doctor had removed one after a good many efforts and then said he felt another, but could not remove it. Though doubting the presence of a foreign body, as the boy's temperature increased to 101° , it was deemed best on the third day to do a radical operation, the pinna and cartilaginous canal being cut loose posteriorly. The drum-head was found to be mostly destroyed, and the most careful examination with the eye and probe discovered no foreign body, the smooth surface which had felt like glass at the first examination, was found to be the denuded promontory. Later the discharge ceased. The mother now volunteered the information that there had never been any bead in the case at all, but that the foreign body actually removed was a small flat stone from a ring, set with several such and that only one of these was missing from the setting.

Gifford believes that the doctor in removing the stone, probably denuded the bone and then mistook the smooth, hard surface thus exposed for another foreign body, and publishes the case as an instructive warning.

EATON.

Systemic Infection from Middle Ear Disease—S. E. ALLEN—*Cincinnati Lancet Clinic*, Oct. 29, 1898.

The case cited is of interest, as demonstrating a way in which general trouble may arise from a focus of infection within the middle ear, and making the necessary tuning-fork tests, the writer concluded that the infection must have been transmitted by the veins of the middle ear to the general circulation.

MACLEAN. (BISHOP.)

Polyp in Shrapnell's Region of remarkably rapid Evolution—

RIPAULT—*New England Med. Monthly*, Nov. 1898.

This new formation occurred in a syphilitic subject, 35 years of age. He had a purulent discharge from the right ear; the perforation being above the short process of the malleus. A month later he complained of deafness, pain and the sensation of having a hard body within the canal. The snare removed an enormous polyp. Mercury and cleansing led to a cure.

LEDERMAN.

Mechanical Vibration Applied to the Spine in the Treatment of Sclerosis of the Middle Ear—DUNDAS GRANT, M.D., F.R.C.S., London.

In a number of cases of chronic catarrh of the middle ear of the class known as the sclerotic, Dundas Grant has made use of mechanical vibration applied to the spine as a method of treatment. He

was led to try this method on the suggestion of his wife, who had observed that certain of her friends who were affected with deafness and who heard better in the midst of a noise, heard also better when riding on bicycles. Under these circumstances the improvement was attributable to mechanical and not to acoustic vibration, and the method described is a means of supplying vibration of the former kind. He uses a small motor, on the axle of which was fixed a disc of brass in an eccentric position. On one side of the motor was attached a flattened curved band of metal, similar to a hand blotter, and on the other a handle like that of a teapot. The instrument is set in action by means of an electric current, and is then applied to the patient's spine, between the shoulders, for about five minutes at a sitting. It should be felt in the head and ears, but should be held as low down as compatible with this effect, so that the acoustic stimulation may be as slight as possible. The patient can usually realize after one application whether benefit has accrued or not. As a rule he applies it daily for a week, and then diminishes the frequency to the minimum necessary to maintain the effect.

The cases described were characterized by tuning-fork evidence of catarrh of the middle ear, were usually gradual in onset, free from any considerable narrowing of the Eustachian tube, and unbefitted to any marked degree by inflation and other tubal treatment.

These cases show varying results, but when we remember the hopeless prognosis in the disease, the effect of the treatment seems to amply justify its further employment. It is possible that it may be beneficial in post-suppurative fixation of the stapes, but Grant has not yet tried it in such cases.

How much of the effect is due to an indirect massage of the stapedio-vestibular joint he is unable to state, but he believes this is its true mode of action. The remarkable sense of well-being which patients experience after its use would suggest that it may also have some effect as a nerve tonic. In any event the enormous improvement produced in three, and the more moderate improvement in other three of the ten hopeless cases described must commend the treatment to all those who have been baffled by such cases; in fact, to all aurists of any considerable experience.

WATSON WILLIAMS.

Ménière's Disease—F. G. FINLEY—*Montreal Med. Jour.*, Vol. xxvii, No. 3.

Dr. F. G. Finley exhibited before the Montreal Medico Chirurgical Society a man presenting the "four cardinal symptoms of Ménière's Disease, viz., vertigo with vomiting, noises in the ears and defective bone conduction." The bone conduction was examined with tuning forks of various pitch. The two pitched notes brought out no variation from the normal, whereas with the high notes, the conduction was very defective. Dr. Finley was of opinion that "gastric disturbance undoubtedly increases the frequency and often precipitates the attack."

GIBB WISHART.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Diphtheria and its Logical Treatment—A. M. OSNESS—*The Med. Herald*, Vol. xvii, No. 11, November, 1898.

This paper is an arraignment of the theory that bacteria are "causative factors of disease," and its author regards diphtheria as an infectious process—"a locus of greater vulnerability in the system." He advocates, as preferable to antitoxin, the introduction of chemical agents that are carried by the blood stream to the affected part where they neutralize or antagonize the toxin. He has used with good result the monosulphide of calcium in three-fourth grain doses every half hour for a period of thirty-six hours.

EATON.

Diphtheria: Some Observations on its Contagiousness and Treatment—J. K. PEEK—*Richmond Journ. of Practice*, October, 1898.

A review of the diagnosis, symptoms and treatment. Antitoxin is recommended in all stages.

SCHEPPEGRELL.

VII. INSTRUMENTS AND THERAPY.

Citric Acid in the Prophylaxis of Whooping Cough—M. FILHO—*The Southern Clinic*, November, 1898, *The Therapist*.

The author states that the special bacillus of pertussis is destroyed in its chosen home, the larynx, by swabbing the periglottic region with a 10 per cent solution of citric acid with simple syrup. It also constitutes an effective prophylaxis against infection. He succeeded in preventing the disease in many children living with others infected, by this means, or by merely the administration of small quantities of citric lemonade during the day. He considers resorcin and asaprol the most effective of other remedies.

SCHEPPEGRELL.

Vapor Massage in the Treatment of Respiratory and Aural Affections—H. M. DUNLAP, Battle Creek—*The Physician and Surgeon*, Oct. 1898.

Dunlap recommends vapor massage in diseases of the middle ear and respiratory tract—says that the same effect may be produced in these localities by this form of massage as that produced in other parts of the body by manual massage—that it follows the same indication, as the circulation is always involved in these diseases. This form of treatment may be carried out by means of a medicator attached to a compressed air apparatus.

ALICE EWING. (BISHOP.)

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ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

LATENT EMPYEMA OF THE ACCESSORY CAVITIES OF THE NOSE.

BY GOTTLIEB KICER, M.D., COPENHAGEN, DENMARK.

As a basis for the observations recorded in this paper, I submit a series of case histories together with the details of post-mortem examinations. A number of these cases are taken from the private clinic of Dr. Schmiegelow and the balance from the oto-laryngologic clinic of the Commune Hospital.

Two hundred post-mortems, with an attempt at systematic recording of same, have been made; the cause of death has not been taken into consideration.

The frontal, sphenoidal and ethmoidal areas have been opened from the cranial cavity; the maxillary sinus has been exposed by the chiseling away of the anterior or superior wall. The post-mortems were divided as follows:

AGE.	Male.	Female.	Total.
10-20.....	3	4	7
20-40.....	24	20	44
40-60.....	39	33	72
60-80.....	23	49	72
	<hr/> 89	<hr/> 106	<hr/> 195

Five post-mortems were made in subjects under ten years of age.

The following table indicates how often Empyema was found present in the various accessory cavities:

AGE.	Sinus Maxillare.	Sinus Frontale.	Sinus Sphenoidale.	Celluli Ethmoidale.	Total.	Number of Post-Mortems.
10-20.....	1	0	5	0	6	7
20-40.....	13	2	6	1	22	44
40-60.....	16	2	8	4	30	72
60-80.....	9	9	10	2	30	72
	39	13	29	7	88	195

Empyema of the *Maxillary Sinus* existed in 39 cases. In nine of these the affection was bi-lateral. In 16 (6 bi-lateral) there was pus. In 13 (1 bi-lateral) a muco-purulent secretion was found. In 10 (2 bi-lateral) a sero-purulent secretion was present. In 42 post-mortems one case of non-purulent secretion was found.

Empyema of the *Sphenoidal Sinus* existed in 29 post-mortems. Seventeen of these were bi-lateral. In 14 (1 bi-lateral) pus was found: in 9 (3 bi-lateral) muco-purulent secretion, and in 7 (2 bi-lateral) sero-purulent secretion was present. In 40 post-mortems there was one case of non-purulent secretion found.

Empyema of the *Ethmoid Cells* existed in 7 post-mortems. One of these was bi-lateral. In 4 there was pus, in 2 muco-purulent secretion and in 2 sero-purulent secretion. In 33 post-mortems one case of non-purulent secretion was found.

In the 200 post-mortems, 105 contained the products of empyema in one or more of the accessory cavities. Thus in the maxillary sinus in 75 cases (37%), in the sphenoidal sinus in 66 cases (30%), in the ethmoid cells in 39 cases (19%), in the frontal sinus in 29 cases (15%).

Of the 200 post-mortems 59 were found with empyema in one or more of the accessory cavities, viz.: In the maxillary sinus in 19%, in the sphenoid sinus in 15%, in the frontal sinus in 7% and in the ethmoid cells in 3.5%.

Concomitant Empyema was found in 21 post-mortems. In 7 of the 13 cases of frontal sinus empyema, pus was also found in the maxillary sinus of the corresponding side. In two of these the frontal sinus accumulations were bi-lateral.

The greenish-yellow pus referred to by Killian as characteristic of empyema of the frontal sinus was seen in only three of the 13 cases: it was also found twice in the maxillary sinus and in the sphenoid sinus, and once in the ethmoid cells. This is very natural, as the coloring of the pus is due to the chromogenic bacteria.

In 11 of the post-mortem examinations all of the accessory cavities contained a non-purulent secretion, and if the post-mortem diagnosis were considered, the above facts might have been determined as the cause of death. A post-mortem rhinoscopic inspection suggested empyema in about one half of the subjects. The case-records indicated that not one of these cases had been diagnosed as such.

Anatomical Variations.—The following observations were recorded. In five cases the frontal sinus, both right and left, was absent: in two cases the right sinus, and in five cases the left sinus was found wanting.

In four cases the frontal sinus was completely separated into two cavities by a distinct septum placed in an almost horizontal plane, each cavity having its individual point of outlet. In two cases this special partitioning existed only on the right side. In one case there was an accessory series of cells, forming a distinct sinus in addition to the normal right and left sinus: this third sinus also contained an outlet foramen with its point of exit directly above and anterior to the right ductus naso-frontalis. In two cases there were additional cavities found, and these were in conjunction with the frontal sinus proper.

In order to determine the average size of the frontal sinus, calliper measurements were undertaken in 135 cases: these measurements took into consideration the three dimensions of the sinus, viz.: Height, width and depth.

Between the ages 20–80, and in the measurements of the sinuses of 70 males and 65 females, the following averages of the frontal sinus were recorded:

	Height.	Width.	Depth.
Males.....	2.5 cm.	2.4 cm.	2.0 cm.
Females.....	2.1 cm.	2.0 cm.	1.6 cm.

In the same series of cases measurements were also made of the sphenoid cells, two dimensions, length and breadth, being taken into consideration. Here there was no essential difference noted in the size of the cells in male or female. The average sphenoid sinus measured 2 cm. in length and 1.5 cm. in breadth. Bouyer maintains that with the well-developed frontal sinus there are correspondingly small sphenoid cells, and vice versa. This appeared to be the case in 62%. We were unable to substantiate the claim, however, that the right frontal sinus was always the larger of the two.

The sphenoid cells of both sides were absent in seven cases. In all of these the subjects were over twenty-five years of age. In one case the left sphenoid cells were lacking, and in nine cases the right cells were absent. In one case the sphenoid septum was absent, so that but one large sinus existed, containing two points of exit. In several instances two almond-shaped, symmetric patches were noted in the area of the pterygoid process, extending 1 cm. below the sinus.

In two cases the sphenoid sinus was found divided by a horizontal septum, separating the cells laterally into two independent areas, each with its individual point of exit; there was no connection with the ethmoid cells. In one case the right sinus was divided by a horizontally placed septum into a forward and posterior area, having no point of exit. Frequently one sinus was noted situated considerably posterior to the other.

The case-records comprise 68 cases of empyema of the maxillary sinus (10 bi-lateral), seven cases of empyema of the frontal sinus, five cases of empyema of the ethmoid cells and one case of empyema of the sphenoid cells.

Of the 78 cases of empyema of the maxillary sinus the cause in 65% of the cases was dental, and in 35% of the cases nasal. In 40 cases of empyema 52% were cured. In one case of empyema of the maxillary sinus the patient suffered very much from a marked lethargy with an irresistible desire to sleep, day or night. The cure was established in one month.

In three observations the accessory cavities of the nose have been considered separately, and the method of definite diagnosis and most favorable therapy have been given careful consideration, as our knowledge of this class of cases is based partly on the history of the cases and partly on the investigations in the post-mortem room. The latter were especially valuable, as an exhaustive series of probing and puncturing of the accessory cavities on the cadavers were undertaken.

The probe was used on 100 cadavers. The probe used in exploring the maxillary sinus was 12 cmt. long and terminated in a right angled crook 6 mm. in length. In 70% of the subjects examined the maxillary sinus was probed and the work facilitated by the removal of the anterior wall. In 50% of these measurements the distance from the ostium maxillare to the lower free border of the septum nasi was from 5—5.4 cmt.

A similar probe, bent at an angle of 160° , was used in the exploration of the sphenoidal sinus. In 78% of the subjects ex-

amined the probing was successful. In 60% the distance from the ostium sphenoidale to the lower free border of the septum nasi was 7—7.7 cm.

For the exploration of the frontal sinus the bent end of the probe was from 1—3¹/₂ cm. long and the angle formed with the shaft varied from 90—130°. In about 48% of the examined subjects the probing was successful, and the distance from the base of the sinus to the lower free border of the septum nasi was, in 60%, 6—6.7 cm.

As the results of our observations it was definitely established that puncture of the frontal sinus from the cavum nasi was a decidedly risky procedure. The various methods advocated (Richet, Cossolino, Winckler, Engelmann, Schaeffer) were tried frequently, and, as a rule, the probe entered the sinus after piercing several cells. In several instances, however, the probe penetrated the lamina cribosa, entering the cavum cranii without the operator knowing that the probe had taken the wrong direction.

BLEEDING POLYP OF THE NASAL SEPTUM.

BY EDWARD J. BROWN, M.D., MINNEAPOLIS, MINN.

Mrs. W. J. W., twenty-nine years old, was referred to me August 4, 1893, by her physician, Dr. J. P. Barber, of this city. For some months she has had daily hemorrhages from the left naris. Is pregnant about six months. General health good, but has had occasional severe head-aches since a child. I found on the anterior part of the left septum a polyp, the size of a large pea, having a small pedicle and showing evidence of recent hemorrhage.

The growth was snared with but slight bleeding and the base cauterized with chromic acid. Dr. Barber told me later there was no further trouble. The rarity of these cases is the only excuse for this report.

EDEMA OF THE LARYNX.*

BY CHARLES E. CLARK, M.D., KANSAS CITY, MO.

Professor of Clinical Laryngology, Kansas City Medical College, Kansas City, Mo.

The title of the paper which it is my pleasure to present to you is not the one which I at first decided upon, when requested to contribute a paper at this meeting. My change of determination was occasioned a few days since by reading the very excellent and exhaustive article by Dr. Clarence C. Rice, which appeared in the *New York Medical Journal* of December 3, 1898, entitled "Acute Inflammatory Conditions of the Upper Air Passages Accompanied by Laryngeal Edema."

Doubtless many general practitioners, and certainly most laryngologists commenced their professional work fully equipped with laryngeal lancets and tracheotomy instruments in the belief that edema of the larynx was an affection soon to be encountered. When it is learned that a gentleman of such recognized ability and extensive experience as Dr. Rice, only reports three cases of acute edema of the larynx, accompanying inflammatory affections of the upper respiratory tract in his personal experience during the last ten years, and that a review of the literature of the subject during the same period, as shown by the "Index Medicus" gives only forty-one reported cases, I trust that the one case, which I am permitted to report to you, may be of interest.

The classifications of edema of the larynx are almost as numerous as the authors consulted, but probably the most complete is the one found in "Morell Mackenzie's System of Diseases of the Nose and Throat," and which for the convenience of reference I have tabulated:

Acute Edema of the Larynx.	Primary	{ Occurring in healthy persons.	{ Typical. Contiguous. Consecutive.
	Secondary	{ Occurring in those suffering from some other complaint.	

Typical edematous laryngitis occurs as a result of simple catarrhal laryngitis and is extremely rare. Sestier, in a series of two hundred and fifteen cases, attributes this cause in six per cent. Mackenzie considers these cases in most instances due to septic infection, and

*Read before the Kansas City District Medical Society, January 5, 1899.

mentions hospital physicians and nurses as especially predisposed to it. Malarial poison has also been mentioned as a cause, notably in the cases reported by Dr. Jacob D. Arnold, of San Francisco, in Vol. 2. "Burnett's System of Diseases of the Nose and Throat."

Dr. Rice expresses himself as much in doubt as to the authenticity of the cases of edema reported as occurring secondary to a simple catarrhal laryngitis, on account of the imperfect exclusion of diphtheritic infection or heart and kidney lesions.

Contiguous edematous laryngitis is by far the most common form encountered, and it extends in most instances from some inflammatory affection of the pharynx. It is to this class that the case, which I shall report, belongs.

Consecutive edematous laryngitis results from a disease of the laryngeal cartilages occurring as a sequelæ of small-pox, typhoid fever, scarlet fever, etc.

Secondary edematous laryngitis is an edema of the larynx, occurring as a complication in various heart, renal, hepatic and other affections, favoring local or general serous effusions. In these cases it is usually taught that the edema is of a passive character. However, it is stated by Sestier, that "the intervention of a phlegmasia of the pharynx and larynx, or neighboring tissues, is nearly always necessary," to the development of an edema, even in these subjects. In two hundred cases of Bright's disease examined by Mackenzie in the London Hospital, not a single instance of laryngeal edema was found, which certainly suggests the truthfulness of Sestier's statement.

Mr. Peter N., fifty-five years of age, five feet four inches high, usual weight one hundred and sixty pounds, by occupation a barber, was first seen by me in company with his physician, Dr. C. H. Lester, about 8 a. m., May 29, 1898. Patient has slight anterior curvature of the upper dorsal vertebrae, caused by a fall during infancy. He has suffered from gastric and intestinal disturbances since early manhood. In 1887, after a drive, upon a cold day, he developed pneumonia, which lasted three or four weeks, and since which he has suffered from a mitral regurgitation, with occasional attacks of cardiac asthma. About three weeks ago he contracted an acute sore throat, which had almost subsided, but became much exaggerated after the exposure of sleeping in a draught on Friday night (approximately forty-eight hours before coming under my observation). When first seen he had spent a most restless night, unable either to lie down or sleep in a sitting posture, with the symptoms becoming more and more exaggerated. His countenance presented

a distressed and anxious look which fulfilled the most graphic textbook description. The cyanosis and dyspnea were marked, deglutition painful, and conversation much impeded. Temperature was normal.

Examination revealed an intensely inflamed and edematous condition of entire fauces, left tonsillar region enormously swollen, uvula enlarged and edematous on all sides, until it was about three-fourths of an inch in diameter, and one and a half inches in length, the free extremity passing down to the right of the epiglottis, and could be seen only by elevating it by means of a probe. By forcibly depressing the tongue, the tip of the edematous epiglottis could be seen. The entire glosso-epiglottic space was filled by one edematous bleb, the size of one's finger, extending laterally the entire width of the space, and greatly interfering with the elevation of the epiglottis.

By means of reflected light the edema could be seen to involve the entire upper surface of the epiglottis, together with the ary-epiglottic folds. The loose connective tissue of the submaxillary space was also markedly infiltrated, giving him a double chin appearance.

Treatment.—The parts were thoroughly sprayed with a warm pyrozone solution, after which, under the reflected light, each bleb was incised with the long-handled tonsillar bistoury. Subsequently the parts were sprayed with a ten grain solution of zinc sulphate as warm as could be tolerated with comfort. Fully forty-five minutes were consumed in the treatment, but at its conclusion the parts presented a much improved appearance. Patient was directed to gargle with hot water hourly, and use Fraser's Astringent Throat Tablets.

FORMULA.

Rx Acid benzoic	gr. $\frac{1}{5}$
Opium powd.....	gr. $\frac{1}{50}$
Catechu powd.....	gr. $\frac{1}{4}$
Camphor powd.....	gr. $\frac{1}{20}$
Ext. Yerba Santa	gr. $\frac{1}{4}$
Sugar.....	q. s.
Aromatics	q. s.

May 30th, 10 a. m., patient breathing much easier, although the throat is quite painful, and he has not obtained any sleep. Feels less apprehension regarding his present condition. Glosso-epiglottic bleb partially reformed and is again incised. Same local treatment given as before.

May 31, 10 a. m., patient breathing much easier and rested very well until 1 a. m., and after 5 a. m.; but during the interval was quite uncomfortable. Appearance of local condition much improved. No edema to be seen, although the throat is much inflamed.

June 1, 1898, 10 a. m., patient walked into the office smiling; stated that he felt like a new man, and chatted for twenty minutes upon his case. The parts are regaining their normal size and appearance.

June 4, 1898, throat almost normal and the patient discharged.

While I have classed this case as one of contiguous edematous laryngitis, yet it is more than probable, that to some extent at least, the patient was predisposed to the affection through his deficient circulation, and illustrates the statement of Sestier above quoted in reference to secondary edema.

412-413 Altman Building.

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Acute Inflammatory Conditions of the Upper Air-Passages Accompanied by Laryngeal Edema - C. C. RICE - *N. Y. Med. Journ.*, December 3, 1898.

The question of the existence of an acute primary edema laryngitis, bearing no relationship to other inflammations of this region, but due to some special germ or infection, is discussed. The author believes, however, that as the cause of this disease is more thoroughly studied, the cases will be exceedingly rare which change cannot be ascribed to either some pre-existing local affection in the pharynx or larynx, or to some constitutional disease or external irritation.

SCHEPPEGRELL.

Sudden Stenosis of the Larynx from Angio-Neurotic Edema

DAMIENO—*Revue Int. de Laryngol., etc.*, November 19, 1898.

The affection developed suddenly without any known cause after a short walk, the first symptom being tumefaction of the nose, which soon extended to the throat. The patient passed an agitated night, and the following morning the fauces and palate were similarly affected.

When seen the patient presented severe dyspnea, and in order to facilitate the laryngoscopic examination, a scarification of the uvula was made. The patient afterwards became worse, so that intubation was decided upon. The first tube was immediately rejected, but the second was retained and gave relief, the symptoms soon disappearing.

SCHEPPEGRELL.

A CASE OF BILATERAL MASTOIDITIS.

BY H. MCL. MORTON, M.S., M.D., MINNEAPOLIS, MINN.

Oculist and Aurist to the St. Barnabas and Northwestern Hospitals, Minneapolis, Minn.

Bilateral mastoiditis, while not essentially different in any way from unilateral involvement, is clinically interesting on account of its rarity. Although many operators may have had to deal with cases during the past few years—and I have no doubt that this is true—few cases have been handed down in literature. It is with the hope that this report may call forth others, as well as the interest in itself, that I offer this history.

As stated, in so far as the cause and pathology is concerned, the conditions are as found in ordinary mastoid involvement. It is true, however, that additional gravity is added to the course of the disease and may give rise to perplexing problems as to the advisability of operating upon both at one time, or singly. In a case reported by Stillson in the *Annals of Otology* for May, 1897, the picture was not of a well defined double mastoid involvement, the typical course of the disease running in the left ear only.

In this case, the pictures presented were typical and the course was that of a marked mastoid involvement yielding to prompt operative measures and continuing to a normal recovery.

Mrs. R., at forty-four, French woman, consulted me upon March 26th, 1893.

She tells me she has been a great sufferer for many years with naso-pharyngeal catarrh. She recently was advised to use a douche of a mild saline solution in the nose, permitting it to run in one naris back to the pharyngeal vault and out the other naris. After a few attempts at this she was suddenly taken with a pain in both ears and this continuing she felt it imperative to consult an aurist. I found both ears discharging a very profuse yellow pus. There was tenderness with marked swelling, and redness of both mastoid processes. The patient's temperature was markedly elevated and she was in a very nervous state from several days of severe pain, which radiated from the mastoids backwards, and also downwards into the neck.

I gave the woman small doses of calomel hourly for six hours, and followed this with a large dose of Rochelle salts, placed several leaches back of each ear and blood freely abstracted, after which hot

fomentations were applied at frequent intervals of eight minutes. The middle ear was douched hourly with a warm boracic solution. There was at first apparent improvement which, not continuing, I decided to operate upon both mastoids. Upon April 4th, under chloroform, both processes were opened by the chisel and mallet. Both antri were freed from the external bony plate and a mass of pus and granular debris removed by douche and curette, after which the wounds were dressed. The case proceeded with an uninterrupted recovery. I saw the woman about two months ago—now over five years since the operation—and she was having no inconvenience from her ears and her hearing was not noticeably impaired.

I think that if operated upon promptly, both mastoids may be opened and without greater danger than in monolateral involvement.

No. 315 New York Life Building.

Rupture of the Drumhead Not Necessarily Incurable—L. J.

LAUTERBACH, Philadelphia *Penn. Med. Jour.*, October, 1898.

In reference to the subject under consideration the author calls attention to a statement published in a text-book on physiology employed in the common schools. The book is edited by a physician, and thus creates an erroneous impression upon the young mind. In it the writer mentions, "that if once broken this delicate membrane (drum) cannot be repaired and deafness results." Such a false knowledge deeply fixed may prevent the institution of prompt and proper measures to save the integrity of the drum, when such treatment is indicated.

Perforations of the membrana tympani are nearly always curable, when seen early in their history.

The author has seen a secondary membrane reappear the third time, after an ossiculectomy. There are two main propositions to be considered in the healing of perforations:

First—We must be sure that the structures within the perforated drum are not in a state of inflammation. If there exists any disease this must be cured before the membrane proper is touched.

Second—If after such disease is remedied, and healing of the drum does not take place promptly, then cicatrization of the edges of the perforation has occurred and these edges must be stimulated. Cases are cited which show that the membrane heals promptly after traumatic rupture.

The drumhead is not an essential of hearing, as shown in cases of chronic suppuration in whom polypi and granulation tissue are removed and improvement in hearing results.

LIEDERMAN.

A CASE OF FEEDING IN SUPPURATIVE OTITIS MEDIA.

BY JAS. W. DUNN, M.D., CAIRO, ILL.

Expert Examiner to Pension Bureau; Oculist to St. Mary's Infirmary.

The following case is reported to illustrate a principle that has actuated me in the treatment of several of its kind. This one case is selected and reported because it explains the principle properly, and though it by itself cannot be expected to establish the correctness of the therapeutic procedure, it suggests it so forcibly that it may be submitted to each physician to prove its worth. The case is not an uncommon one, and, therefore, any aurist can have ample opportunity to try it. Possibly if it were resorted to in suitable suppurative conditions of the middle ear in children there might be fewer cases of old perforated ear-drums in which there is no tendency to heal:

J. Hatcher, aged ten, consulted me September 1. He had suffered with a severe ear-ache in his right ear for two nights, and the culmination of the trouble was a profuse discharge from that ear. The discharge was thin, serous and contained very little pus. After a thorough cleansing, I found a large perforation in the posterior-inferior quadrant of the membrane. This tissue was only moderately red and swollen and the lining membrane of the middle ear was in the same condition. The nose and post-nares were thoroughly cleansed and the pus remaining in the middle ear blown out by inflating with a nebulizer through the nose, and subgallate of bismuth insufflated. The patient was anemic, his feet and ankles covered with sluggish sores, and he showed every evidence of being poorly nourished, for which condition he had already been under competent treatment for several days. At the second sitting in the afternoon the ear was again thoroughly cleansed and treated as above. The next day the patient reported having had severe ear-ache in the left ear through the night, and an examination revealed a discharge similar to that of the other ear and the same condition of the drum and middle ear. This ear was similarly treated; the treatment of both ears was continued about ten days without any change in the character or quantity of the discharge. During that time I continued to thoroughly cleanse the middle ear, nebulize the nose and post-nares, and apply all the best antiseptics, such as iodoform gauze, iodoform, boric acid, calendulated boric acid, nosophen, peroxide of hydrogen,

etc. Coming to the conclusion that the indisposition of the ears to heal was due to malnutrition of the parts and this malnutrition was greatly due to a lack in the quality of the nourishment offered, I decided to feed them.

For this purpose I had the patient's mother make a beef juice by broiling both sides of a piece of fresh steak and squeezing the juice out. The ears were washed out every two or three hours with warm water and several drops of this nourishment injected. There was an immediate change for the better. The discharge gradually decreased, the inflammation subsided, the perforations healed and the hearing began to improve. The case was dismissed in four days, cured. No medicaments were used during this time.

This cure was due to the beef juice. The reparatory process going on in the ear not only did not repair, but actually militated against the healing, because the blood-vessels dumped in the way material not fit for building purposes, which, in spite of antiseptics, either broke down into pus, or was discharged as serum, because the parts were not able to appropriate the same. The beef juice afforded the proper nutriment for promoting a healthy reaction of the parts and repairing the damages to the same, and it was immediately consumed.

CORRESPONDENCE.

ATLANTA, GA., Dec. 13, 1898.

Editors THE LARYNGOSCOPE:

DEAR SIRS—I see that rubber has recently been recommended in *THE LARYNGOSCOPE* as a good material for use as a plug in cases of operation on the maxillary antrum. I am glad to hear that it has been found satisfactory. When considering some months ago what material to employ I was inclined to put aside rubber, which I tried in the form used by dentists, on account mainly of the probability of its becoming saturated with secretions containing germs. I ultimately employed aluminum, and I have a patient now who has worn for months a plug of this metal with a rounded head which lies in the canine fossa without the least inconvenience. The case was cured long ago, but on account of a previous tendency to recurrence, I considered it advisable to keep the opening patent for a time.

Yours truly,

ALEX. W. STIRLING, M.D.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, December 28, 1898.

Jonathan Wright, M.D., Chairman.

Dr. Robert C. Myles exhibited several instruments made on the principle of the turtle-beak and the eagle-beak. They are very strong, and are intended for use in removing tissues at the base of the tonsils.

A Case of Operation for Epithelioma of the Nose.

Dr. J. F. McKernon reported this case. The patient, a machinist, seventy-two years of age, came to him on May 7, 1898. Twenty-six years ago, while forging a piece of steel, a spark struck him on the side of the nose, but in a few days all traces of the burn disappeared. Three months later a small, dark spot appeared at this point. It remained without change for ten years, during which time it gave no trouble. The following year it began to grow slowly, and continued to do so until it reached the size of a Lima bean. Eight years ago a physician advised electricity, which was used for several weeks, only with the result of accelerating its growth. Three years ago another physician advised its removal by ligature. The growth, which was then about the size of a hickory nut, was removed in this way. Two months later the same physician cauterized it with nitric acid. It then became painful and grew rapidly. For the next three years it received no treatment except the application of aristol to check the watery discharge. Examination showed an irregular mass elevated about one inch above the surrounding surface, purplish in color and about the size of an English walnut. It encroached upon the nose and cheek. There was a thin brownish discharge. The growth almost completely blocked the nostril. The inferior turbinate was greatly enlarged and bled easily. There was also a large reddish mass hanging down into the pharyngeal vault (the posterior end of the inferior turbinated body). The diagnosis of epithelioma was made and corroborated by Dr. George T. Elliot. Twelve days later, the speaker said, he

operated and removed the neoplasm, together with the turbinated bodies and a portion of the cheek and the upper lip. The septum was left intact. Two transverse incisions were made. One under the eye, extending outward to the lobe of the ear, and the other along the lower border of the maxilla, and to these was added a vertical incision half an inch from the indurated area. A flap of skin and connective tissue was dissected outward. The man made an uninterrupted recovery, and the sutures were removed on the eighth day. The right nostril showed a tendency to close, and after the use of a nasal "expander" for about ten days the patient suggested the use of a hollow tube of ivory. Such a tube was made, and has been worn by the patient for several months, but will soon be discontinued. The inferior turbinate was found, on microscopical examination, to be involved in the disease.

A Case of Tubercular Laryngitis.

Dr. J. E. Newcomb exhibited a man, forty-six years of age, who was suffering from tubercular laryngitis. He had had a specific lesion twenty-five years ago, but there were no present lesions of syphilis. Four years ago he began to have a cough and hemoptysis. When seven years old he had had tubercular disease of the left knee joint. He was first seen last summer, and at that time there was a small mulberry-like mass which appeared on phonation only. It was apparently above the vocal cord and situated at the edge of the ventricle. There were no definite physical signs in the lungs. He was given iodide of potassium up to the physiological effect without result. A portion removed by the curette was then examined by Dr. Wright, who reported it to be tuberculous. The left vocal cord is now quite restricted in movement and contains considerable infiltration. The case seemed to illustrate one of the slower types of laryngeal tuberculosis. His symptoms are now no more severe than when he was first seen.

Submaxillary Calculus.

Dr. R. C. Myles exhibited a submaxillary calculus which was removed from a man aged thirty-four. He had only found it by probing Wharton's duct, and this, too, in spite of the claims made by some that this duct cannot be probed. When the probe reached $2\frac{1}{16}$ inches it struck the calculus. The duct was then dilated and washed out with boric acid. A peculiar feature of the case was the strange mental condition of the patient, and he had rapidly improved since the removal of the calculus. This mental condition seemed to him quite interesting, because he had seen one or two cases of sub-

maxillary disease in which the mental symptoms had been similar. As the calculus was in the center of the gland, it was difficult, owing to the tension of the fibrous tissue there, to remove the stone. An external operation was liable to lead to an external salivary fistula. This patient had at present an internal salivary fistula. The calculus was about one inch beneath the floor of the mouth. After making an incision with a rectangular knife down to the stone, the wound was dilated with a right angle uterine dilator in order to avoid wounding the gustatory nerve. After many tiresome attempts it was removed with a malleable handle curette.

Dr. Wright remarked that last summer, during his absence, a similar case of calculus had come to his clinic. The stone was three-eighths of an inch in diameter.

Some Unusual Tonsils.

Dr. F. E. Hopkins, of Springfield, Mass., read a brief paper on this subject. He said that the general opinion seemed to be that a growth of the tonsil does not recur after excision, but the possibility of its occasional occurrence should be borne in mind. The first case exhibited a pear-shaped neoplasm attached by a small pedicle to the right tonsil. With a little effort the patient could throw the growth forward into the mouth or swallow it. He could sleep only when lying on the right side, as in any other position the neoplasm fell across the larynx and obstructed respiration. Dr. Wright examined the growth after its removal and reported it to be a fibro-angioma.

The second case was a young girl from whom the tonsils had been *thoroughly* excised by the guillotine. Four months afterward, or in April, 1897, the patient had what appeared to be an attack of acute amygdalitis, and the left tonsil was so much enlarged that it was removed. Dr. Wright's examination showed this tissue to be simple hypertrophy. He had succeeded in finding only fourteen cases in which recurrence of the tonsil after excision had been definitely recorded, but in only his own had the microscopical examination been given.

The third case was a boy of thirteen years, who was seen in August, 1896. He had been operated upon by a surgeon the previous June for suppurative cervical glands. The right tonsil was found to be very greatly enlarged, but not painful. The growth was considered to be tubercular or sarcomatous. Dr. Wright reported the specimen to be one of lymphoid hypertrophy. On May 10, 1897, the patient returned saying that there had been no trouble until a few weeks previously, when the growth had returned quite rapidly. The

appearance was very much like that presented at the first visit except that there was some erosion. It was removed by the snare, and was likewise pronounced to be simply hypertrophy. Early in the present year another recurrent growth was removed, and Dr. Wright stated that it was exceedingly probable that this was a case of sarcoma. On May 4, 1898, the man returned, saying that, although there had been a period of quiescence, the growth had returned in the past three weeks. It was about the size of an English walnut. The common carotid was tied and the growth carefully enucleated. The pathologist of the Springfield Hospital reported the growth to be suspiciously like sarcoma, but of this he was not positive. By September 20 there was again a large recurrence. Daily injections of the toxins of erysipelas and of the bacillus prodigiosus were then begun, and under this treatment the growth had nearly disappeared.

A Case of Hysterical Larynx.

Dr. Hopkins also reported this case. The patient was a young anemic and nervous girl. She came to him because of a terrifying spasm of the larynx. At the time of the June examination at school she began to whoop, and this increased until in August there was a high-pitched "squeal." Examination showed no excuse for such strange explosions. A proper impression was made on her and a favorable prognosis given. After an interval of improvement she relapsed, and the galvano-cautery was applied. In March, 1898, the spasms became so violent that it was occasionally necessary to resort to general anesthesia. She was then placed under the care of Dr. Graeme M. Hammond, and was treated in a general hospital. Thinking the case might be one of convulsive tic, she was treated by him with large doses of the fluid extract of conium, but without benefit. Having again come under the speaker's care, he introduced an intubation tube. Three tubes were coughed up in rapid succession, and then one was retained about half an hour. The result was that the patient was completely cured.

Hysterical Aphonia and Hysterical Mutism.

Dr. W. M. Leszynsky, in connection with the paper of Dr. Hopkins, presented two patients. One of these was a case of periodical hysterical aphonia. This case was exhibited to contrast it with the condition of hysterical mutism. The patient with hysterical aphonia had been sent to him by Dr. Newcomb with the diagnosis of aphonia. At the first visit her whisper was changed to sonorous speech by suggestion in connection with the application of the faradic wire brush to the external surface of the neck. She returned the next day with

the condition just as at first. The treatment was repeated, with the same result, eight or nine times. She was then sent to the Presbyterian Hospital, and after eight weeks she recovered completely. She returned to him this fall with aphonia, similar to the first attack. Dr. Newcomb and Dr. Freudenthal also tried to treat her by suggestion, but without benefit. Constitutional treatment of the case seemed, therefore, to offer a better chance of relief.

The second case was a girl, twenty-one years of age, a sewing machine operator. Since reaching puberty she had had various hysterical attacks. He saw her first in November, 1897. About four weeks before the first visit the eyelids began to contract and were, at the time of the first examination, completely closed. She presented a condition not of hysterical ptosis, but of tonic blepharo spasm. There was no anesthesia or hyperesthesia of the face or cornea. By means of suggestion in the waking state the eyes remained open after a few days. She relapsed subsequently, and then was relieved by hypnotic suggestion. On August 30, 1898, she returned, and her mother stated that on entering the room after the death of her brother she lost her speech. There was some tenderness in both ovarian regions, but there was no disturbance of the genital organs. Dr. Chappell found nothing abnormal in the larynx. The visual fields are greatly contracted. A recent examination had revealed ill-defined areas of anesthesia and analgesia over the body and limbs. After having tried various methods of hypnotism, an attempt was made to etherize her. During this her speech returned, and she cried out lustily. The ether was discontinued, but since then she had been speechless. Formerly, the speaker said, these cases had been classified among the functional motor aphasias. The term "hysterical mutism" had been first suggested in 1883, and had been adopted since then by Charcot and other neurologists. A pure motor aphasia is always due to a lesion of Broca's convolution, and in these cases there are, at times, "recurrent utterances." They are the result of the opposite side of the brain coming into action. In view of the fact that the hysterical aphonia is frequently followed by hysterical mutism, the latter had been looked upon by some observers as only an exaggeration of the former. This patient had a fainting spell yesterday, when the eyes closed, and had not opened since. The prognosis is good if the patient can be placed under proper surroundings and treatment—etherization and hydrotherapy.

Dr. Wolff Freudenthal said that the case of hysterical aphonia exhibited nothing but the usual paralysis. He had had under treatment a case of persistent cough that had lasted for three years.

When first seen, three months ago, nothing could be found to account for the cough. Even the administration of large doses of morphine did not improve it. It was noticed that when he was interested in anything special he ceased coughing. At the suggestion of Dr. Leszynsky a large quantity of cerumen was removed from his ear, but the patient persisted in coughing. The man was then given a prescription which was very costly, and immediately there was improvement, which, however, was only temporary.

Dr. M. D. Lederman, in connection with the case wearing the ivory tube, said that in a case of atresia of the nostril he had a large tube, like the nostril end of a Goodwillie tube, made of silver, and the patient had worn the tube for two months without trouble. It was then left out for a week, and during this short time the nostril became nearly occluded and the tube had to be replaced for some time. This dilatation must be kept up for some time after surgical treatment.

Dr. Emil Mayer asked if any bacilli had been found in Dr. Newcomb's case.

Dr. Newcomb said that only one examination for them had been made, and that had been before the operation, but no bacilli had been discovered.

Nasal Insufficiency Due to Exaggerated Prominence of the Anterior Arch of the Cervical Vertebrae.

Dr. J. E. Newcomb read a paper with this title: He said that his remarks would touch upon the old subject of lymphoid hypertrophy. In two cases he had met with a condition which he had not seen mentioned in the text-books. In 1885 a French observer had called attention to the fact that children supposed to have adenoids often really suffered from a condition dependent upon scoliosis of the septum. In 1896 mention was made by Escat of the occurrence of nasal insufficiency as a result of a prominence of the anterior arch of the cervical vertebrae. In May of the present year, Mendel gave a brief account of three such cases, viz: (1) Osseous projection situated at the level of the buccal pharynx with the co-existence of adenoids; (2) an osseous projection in the rhino-pharynx with the co-existence of adenoids; and (3) osseous projection in the rhino-pharynx without the existence of adenoids. Mendel asks, "Shall we operate for adenoids in these cases when adenoids are present?" and answers in the affirmative. Parents should be cautioned against expecting too much from operative procedure, as only a portion of the pathological condition is removable. As the patient grows

older, the projection becomes relatively less in size and finally ceases to give trouble. Dr. Newcomb said that he had met with two such cases. In both, the vegetations present covered the mucosa, stretched over the projection in the rhino-pharynx and ran up beyond it. One case could not be followed after the operation. The other was the ten-year-old son of a colleague, and in this the results of curetting had been all that could be desired.

Dr. Emil Mayer said that he had a case of this rare condition—a young man who came to him ten years ago. The patient was a railroad conductor who was suffering greatly from nasal obstruction. He had been treated for what appeared to be a tumor of the pharynx. The cautery had been used very freely, and consequently when first seen by the speaker the glistening surface of the vertebræ could be plainly seen. The vertebræ were very prominent. There was a good deal of nasal obstruction and pharyngeal irritation.

Dr. W. Kelly Simpson said that he had seen a case in which there had been but little complaint of nasal obstruction. The patient had complained chiefly of an accumulation of mucus in the naso-pharynx, and with a small mirror this accumulation could be seen on the superior border of this vertebral projection. The projection was so marked that it was difficult to pass a cotton applicator up behind it.

Dr. Francis J. Quinlan said that he had seen two cases during the past three years, one in a child and the other in an adult. The child had a marked projecting mass of tissue which might easily have been mistaken at times for a retropharyngeal abscess. The tissue was found to be almost in contact with the soft palate, after the removal of some of the superficial redundant soft tissue and subsequently dividing the periosteum some of this exuberant tissue was removed, with good result. In the case of the adult, a mass was discovered, which was at first thought to be a gumma, further inquiry and examination showed its true nature. There was great tumefaction whenever he got cold, this latter case was an epileptic. He was greatly pleased to hear this paper because it touched upon a field which many laryngologists were apt to overlook.

Dr. Newcomb, in closing, said that he was interested to learn of these other cases. It was usually only after having prepared the patient for operation, and passed the finger up the posterior pharyngeal wall that the physician became aware of the prominence of the vertebræ. He had expected that the paper would call forth reports of other similar cases.

ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

Severe Traumatic Nasal Disfigurement, with Obstructive Deflection of the Septum, Cured by Forcible Reposition and a Plastic Operation—JAMES R. WALLACE, M.D., Dublin—*Dublin Med. Jour.*, November, 1898.

In an adult, male, the nasal bridge and septum had been broken and crushed down by a fall from a horse. The nose was flattened, the nostrils, especially the right one, were disfigured, and almost closed, obstructing respiration. Ten days after the accident the nasal arch was raised with dressing forceps and plugs were introduced. The deformity appeared to be rectified. When the patient was seen three months later by Dr. Wallace, the condition was as follows: The septum was bent and deflected to the right, so that the right nostril was almost completely blocked. The following operation was carried out: Under chloroform and with the posterior nares plugged, the septum was forcibly refractured and twisted into position by means of a pair of septal pliers. In order to transplant and anchor the septum in the mesial plane, a piece of the floor of the left nostril was cut away: the septum was then freed from its abnormal position by a cut which passed in for fully one-third of an inch beneath it. It was then fixed into its new bed by means of a deep silver wire suture, which passed through the structure over the intermaxillary junction and out through the tissues of the lip, firmly fixing the septum in a line with the median point of the upper lip. In addition to this a wire suture was passed from each side of the septum to the corresponding nasal floor. The nostrils were plugged and the septum supported by a splint. An excellent recovery was made. The esthetic result was good and nasal respiration was restored.

A. LOGAN TURNER.

Submucous Operations on the Nasal Septum, with Attempts at Membrane Grafting—T. A. DEBLOIS—*New York Med. Jour.*, October 8, 1898.

A short vertical incision is made at the base of the spur, and then with a flat instrument, similar to that used in dentistry for removing tartar from the teeth, the membrane is separated from the bone or cartilage, working from below forward. The spur is then removed from below upward, care being taken not to cut through the flap. The latter is then brought down and attached with collodion.

In six cases the results were excellent. In other cases they were not so good, the flap either being cut off or sloughing off afterward. The advantage of a submucous operation is that it obviates the danger of making a perforation, heals more quickly than the usual operation, and is not followed by cicatricial tissue where crusts of dried mucus are so apt to lodge.

SCHEPPEGRELL.

A Case Illustrating the Effects on Growth and Development of Removing Nasal Obstruction—M. HUNT—*four. Larynx, Rhin. and Otol.*, October, 1898.

The girl was seventeen years old, thin, anemic, with a flat chest, round shoulders and the stupid aspect of mouth breathers. She complained of nasal obstruction for six years.

The right nostril was completely blocked by a large, dense polyp, while the naso-pharynx was filled by several similar growths, which proved to be merely lobes of the nasal portion. The growth was so tough that the recorder broke his Jarvis snare in attempting its removal. He succeeded in removing it in four parts by means of a tongue ecraseur, under chloroform. Seven months after the operation the girl had grown three and one-half inches and had gained almost three stones in weight.

The growth weighed seven hundred and seventy grains and was a simple mucous polyp.

LEDERMAN.

The Mutual Relationship and Relative Value of Experimental Research and Clinical Experience in Laryngology, Rhinology and Otology—Discussion in the Section of Laryngology and Otology—Annual Meeting of the British Medical Association, Edinburgh, July 26, 1898—*British Med. Jour.*, October 22, 1898.

Sir Felix Semon in opening this discussion on the subject of laryngology criticised the position of those purely clinical laryngologists who look askance at experimental evidence, and of those who, on the other hand, simply stand in a sort of holy awe as soon as the word "experiment" is mentioned. He had no hesitation in stating that he took his place in the center party, which maintains that neither the clinical nor the experimental method can boast of infallibility, and that both of them, whilst fully recognizing their achievements, can be shown to be imperfect in many questions relating to laryngeal pathology. After passing in review the various moot points in the anatomy and physiology of the larynx and its nerve supply, in which experimental research has resulted, on the one hand, in explaining clinical observation, or, on the other hand, in conflicting conclusions, the author discussed the general principles which ought always to be remembered when experimental research is to be employed for the solution of laryngological problems. Greville Macdonald in treating of the rhinological aspect of the discussion, referred to the comparatively recent knowledge

of the physiological functions of the nose in respiration, the filtering functions of the nose demonstrated by StClair Thomson and Lister's observations as to the destructive action of mucous membranes on microorganisms, etc. He stated that his own clinical experience inclined him more surely to the conclusion that asthma must either be regarded as due to direct attack of hyperesthetic bronchial tubes by irritant particles gaining access to the lower respiratory passages as a consequence of nasal obstruction, or that both nose and bronchial tubes are both equally concerned in an inflammatory process involving the whole of the respiratory tract. He compared these views resulting from clinical experience with the experiments of Shurly, who failed to establish in the laboratory a relation subsisting between nasal irritation and bronchial spasm.

Regarding otology, Milligan declared his conviction that no subject has derived more benefit from research work. As a striking example in point he referred to the effects of experimental research on the etiology and treatment of auditory furunculosis. Milligan in the course of his masterly paper referred somewhat fully to the very numerous instances in which research has aided and elucidated the clinical aspects of diseases of the ear.

WATSON WILLIAMS.

Malignant Neoplasms of the Nose, Illustrated by a Specimen of

Cylindroma—W. J. REYNOLDS—*Brooklyn Med. Jour.*, December, 1898.

This growth appeared in a German woman, sixty-five years of age. She had been complaining of severe pain in the head, with offensive breath and a stinking discharge from the nose.

Some dead bone was removed from the nose—a portion of the inferior turbinal.

An "Olliers" operation was performed by Dr. W. C. Wood, in which the nose is freed from its attachment, by separating the nasal bones and the nasal processes of superior maxillary from the frontal bone and the nose is turned down so as to leave the nose entirely exposed.

Much dead bone was removed, and the growth had also invaded the ethmoidal cells. Patient died in two days from shock and meningitis. Dr. de Forest examined the tumor which was removed and pronounced it cylindroma. It is a rare form of growth and Bosworth claims that it cannot be called malignant for it rarely returns if operated upon early. Delafield and Prudden place it under endothelioma or endothelial sarcoma. The endothelioma springs from the endothelium lining, lymph-vessels and lymph-spaces.

Cylindroma is most commonly found in the orbit or in the neighborhood of the orbital cavities and is frequently found in the upper or lower jaw. It does not grow rapidly, but may assume considerable proportions

LEDERMAN.

The Sense of Smell and its Education—BENEDICT—*New York Med. Journ.*, September 10, 1898.

An interesting communication on the sense of smell and its defective development as compared to that of some of the lower animals, the origin of the various odors from the human body, and the importance of special odors from a diagnostic standpoint.

SCHEPPEGRELL.

Pathogenic Bacteria in Chronic Nasal Discharges—VANSANT—*Phil. Polyclinic*, October 29, 1898.

As a result of his investigations, the author believes that nasal blenorrrhea or catarrh is often maintained by the presence of saprophytic or pathogenic bacteria. This demonstrates the necessity of detergent and antiseptic treatment and frequent douching with an abundance of warm alkaline or saline solutions.

SCHEPPEGRELL.

Chronic Nasal Inflammation in Relation to Nervous Prostration
—THOS. F. RUMBOLD—*Atlantic Med. Weekly*, June 4, 1898.

Nervous prostration, commonly attributed to overwork, is frequently due to chronic nasal inflammation. A most frequent cause of this condition results from excesses of alcohol, tobacco, venery and "colds" induced thereby. The congestion of the nasal mucous membrane produces a tendency to "colds," and as the blood supply of the upper two-thirds of the nasal passages, the anterior and posterior ethmoidal cavities, the sphenoidal cells and the frontal sinuses, is derived from within the cranium, the vascular paresis, commencing at the periphery, gradually travels to the cerebral vascular system. This disturbance of the cerebral circulation may be responsible for the irritability of temper, insomnia and other symptoms, which are commonly attributed to nervous prostration from various causes.

SCHEPPEGRELL.

The Relation of the General Practitioner to the Rhinologist, etc.
—F. S. MILBURY—*Brooklyn Med. Jour.*, Nov. 1898.

Attention is called to the importance of nasal and laryngeal examinations being made by the family physician. If disease is discovered which cannot be conscientiously treated by the general practitioner, the patient should be referred to the specialist, without subjecting the case to a prolonged and unsuccessful course of treatment. The confidence of the patient will not be lost, and antagonistic relations will necessarily be unknown.

LEDERMAN.

In What Conditions of the Nose, Pharynx and Larynx the Galvano-Cautery Should Not be Employed—C. C. RICE—*N. Y. Med. Jour.*, August 20, 1898.

The electro-cautery is more precise and conservative than the mineral acids. It is an excellent styptic and valuable in reducing

tonsillar hypertrophy, and is most useful in leptothrix, as it destroys not only the parasites but also the follicles which contain them, and for reducing the enlargements in follicular pharyngitis. In the larynx its usefulness is somewhat limited, but may be applied to advantage in adenoid thickenings and remnants of benign growths.

SCHEPEGRELL.

II. MOUTH AND NASO-PHARYNX.

Chronic Post-Nasal Catarrh—G. F. HAWLEY—*Jour. of the Am. Med. Assoc.*, Nov. 19, 1898.

The paper spoke of the universal prevalence of this disease in America. "In nearly 90 per cent of all chronic catarrh the post-nasal space is affected. It has been claimed that a perfectly healthy post-nasal space can hardly be found in this country." Its relations to inflammatory conditions of the ears, larynx and bronchi were emphasized. The essayist believes that a much larger proportion of cases can be cured than we now cure if an atomizer were employed that would cleanse and medicate the post-nasal space more thoroughly than is done by those commonly used. "One object of this paper is to bring to notice an improved instrument which overcomes many of the difficulties. It is so constructed that it can be inserted through any nostril, no matter how small, until it reaches the post-nasal space, where a medicament, by means of a spray, can be applied directly and forcibly against the entire diseased surface."

BISHOP.

Tumors of the Naso-Pharynx, their Treatment through the Natural Orifices—JOHN R. WINSLOW—*Jour. of Eye, Ear and Throat Diseases*, Vol. iii, No. 4, October, 1898.

In this comprehensive article, which includes etiology, diagnosis and treatment, the author urges that the designation "tumors of the naso-pharynx" should be properly reserved for those growths which take their origin from the walls of that space, and proposes the following nomenclature: A. *Pseudo-Naso-Pharyngeal Growths*. 1. Excessively enlarged posterior ends of the turbinals; 2. Retro-nasal mucous polypi; 3. Sarcomata and adenomata of the posterior surface of the velum palati; 4. Sarcomata of the cervical vertebrae. B. *Tumors of the Naso-Pharynx Proper*. 1. Typical naso-pharyngeal polypi; 2. A typical fibromata (Basal fibromata); 3. Choanal polypi (fibro-mucous); 4. Enchondromata; 5. Hairy polypi; 6. Malignant neoplasms.

In the matter of treatment the author remarks that "Perhaps in no other field has the 'all-sufficient surgeon' exploited his bold and bloody operations with greater *eclat* than in that of naso-pharyngeal tumors. With the possible exception of symphysiotomy, there is

no more horrible operation than temporary resection of the upper jaw as practiced by V. Langenbeck and others. Unfortunately these dangerous and disfiguring operations are attended with no greater success than simpler measures. Case after case is on record of recurrence even of non-malignant growths in spite of such so-called 'radical procedures.' Modern treatment has practically narrowed down to four methods, which are stated in the order of preference: 1. Snare (cold wire and electro-cautery). 2. Electrolysis. 3. Doyen's method of rapid enucleation. 4. Electro-cautery dissection, the relative merits of which are a subject of much dispute, nearly all authorities being agreed in giving the preference to the snare, either hot or cold. Recent literature would seem to indicate a leaning in America toward the electric snare.

In using the cold wire snare the instrument employed must be very strong. While most writers mention steel piano wire No. 5, the author prefers soft iron wire as having greater tensile strength. He avoids general anesthesia on account of danger of suffocation from hemorrhage, and employs a mixture of 20 per cent cocaine with 10 per cent resorcin applied with a mop, administering tr. digitalis before the application and has never had syncope or alarming symptoms.

Electrolysis offers many advantages in that it is: 1. Radical, but permits the patient to attend to his normal pursuits. 2. Its action can be strictly limited in extent and controlled in effect. 3. It renders preliminary operations unnecessary, and tumors may be successfully treated that are beyond all other surgical relief. 4. The danger of hemorrhage is minimal.

A number of cases are reported illustrating the technique of different procedures and an exhaustive bibliography appended.

EATON.

A Case of Foreign Body Removed from the Naso-Pharynx—H. S.

BIRKETT, M.D., Montreal—*British Med. Jour.*, Oct. 22, 1898.

Dr. Birkett said that the tailor's thimble he showed was removed from the naso-pharynx of a woman, aged-thirty-five, who came to him complaining of a profuse offensive discharge and marked nasal intonation of nineteen year's duration. There was no doubt as to the disagreeable character of the discharge; she used several handkerchiefs a day. On examining the naso-pharynx with the rhinoscopic mirror, he found it occupied by a dark, gritty mass. On being questioned, she said she remembered when a child putting a thimble in her mouth, and while it was there she was seized with a violent fit of coughing, during which she thought she swallowed it.

Nothing happened for years afterwards. On examining the naso-pharynx, with the finger, he found a foreign body impacted there, which he told her was undoubtedly the thimble. She was put under an anesthetic, this being necessary owing to the firm manner in which the body was fixed, and by means of forceps guided along his finger into one of the openings of the thimble, he extracted it.

WATSON WILLIAMS.

Naso-Pharyngeal Fibro-Sarcoma—ORRIN L. SMITH—*The Clinique*, November, 1898.

The patient, a male, twenty-six years of age, had suffered for three years with a neoplasm in the naso-pharynx. Four attempts at removal had been made previously, but without success. The tumor was found to be tightly wedged, completely blocking up the naso-pharynx. The attending discomfort was very great. Under chloroform the tumor was *en masse*. This was accomplished with the Löwenburg forceps after futile attempts with the snare and various other instruments. The hemorrhage was frightful but was readily suppressed by a handful of tannated gauze packed into the naso-pharynx. The patient was discharged from the hospital in a week greatly relieved. These tumors are not met with after the age of thirty.

JEFFERS. BISHOP.

Pedicated Fibroma of the Tongue G. MARTUSCELLI—*Archiv. Ital. di Laryngol.*, November 4, 1898.

The patient was a woman of forty years of age, whose mother had died from carcinoma of the uterus and who had herself had syphilis and broncho-pneumonia. Six years before, while eating bread, she had injured the tongue with her teeth. Without suffering much from the wound, she had noticed that instead of healing it became larger, and six months later it began to rapidly augment in volume until it reached the size of a nut and presented in form a pediculated tumor reddish in color, and of a hard elastic consistency. The cervical glands were enlarged. A microscopic examination showed it to be a fibrous polypus, with amyloid degeneration.

SCHIEFFEGRELL.

A Fatal Case of Pharyngeal Hemorrhage G. E. BRIWER—*Nat. Med. Jour.*, December, 1898.

This fatality occurred from a comparatively insignificant wound, probably occasioned by the rupture of a small abscess upon the posterior surface of the soft palate.

A vigorous young man, twenty-five years old, complained of an ordinary sore throat. Some difficulty in swallowing was experienced, and the left tonsil was red and swollen. The patient was not ill enough to be confined to bed. There was a moderate amount of edema of the palate and uvula. In a day or two there was an apparent rupture of the supposed abscess, which was followed by a small amount of bleeding. Slight hemorrhages occurred from time to time, but only lasted for a few moments and ceased spontaneously. The pain and swelling disappeared.

While conversing with a friend, during business hours, a hemorrhage occurred, which resulted in syncope. This bleeding also ceased without treatment and no further trouble arose at this time.

The patient was seen by the author on the evening of the same day. No symptoms other than a feeling of weakness and a slight sense of fullness and discomfort in the left side of the throat were

present. This part of the throat was more congested and prominent than the other. The left half of the palate was thickened and a small clot of blood was adherent to the left posterior pillar extending into the pharynx.

On examination at the office nothing abnormal was seen except a small granulating surface covered with a firm blood clot.

Five hours later, without apparent exciting cause, a hemorrhage suddenly appeared and continued violently for several minutes. It was checked with peroxide of hydrogen. The patient showed evidence of considerable loss of blood. Internal stimulants were given, together with nutrition enemata.

Pressure was made over the ulceration by means of a thick roll of gauze, held in position by a nasal and mouth loop of silk. This controlled all bleeding for a time. Another hemorrhage, however, followed a violent attack of coughing, and resulted in the patient's death.

The author is of the opinion that an early ligation of the common carotid artery would have saved this patient.

LEDERMAN.

Cancer Viewed and Treated from the Standpoint of the General Practitioner, with Reports of Cases—B. C. KEISTER—*Va. Medical Semi-Monthly*, October 21, 1898.

Of 303 patients who suffered from carcinoma of the lip, tongue, nose or nasopharynx, reported by Williams, Whitehead and Pennell, 60 per cent used tobacco and the majority smoked pipes, and 19 per cent had syphilis. Other local causes were direct injury in 11 cases, ulcers from bad teeth in 37, ichthyosis in 14, localized syphilis in 14, and glossitis in three cases: a total of 79 cases out of 194, or 40 per cent, being due to local causes. This demonstrates that local irritation plays a very important part in the etiology of this disease. The author believes that a radical operation for the treatment of any malignant disease that has passed the primary stage should be abandoned and condemned.

SCHEPPEGRELL.

Hypertrophy of the Lingual Tonsil—M. D. LEDERMAN—*Memphis Med. Monthly*, October, 1898.

If the hypertrophied tissue assumes such proportions as to impinge upon the surrounding parts, local applications are not of much service, and the radical removal of the offending mass is demanded. The chemical caustics, electro-cautery or the snare may be used, but the author prefers the tonsillotome.

SCHEPPEGRELL.

The Technique of Tonsillotomy—G. L. RICHARDS—*Charlotte Med. Jour.*, October, 1898.

A description of the usual methods of operation.

SCHEPPEGRELL.

Two Cases from My Note-Book—W. C. GALLOWAY—*Atlanta Med. and Surg. Jour.*, June, 1898.

The first is a case of follicular pharyngitis, and the second a foreign body in the larynx, both of which were successfully treated.

SCHEPPEGRELL.

Hypertrophy of the Pharyngeal Tonsil, and the Importance of its Recognition by the General Practitioner J. W. JERVEY—*New York Med. Jour.*, October 22, 1898.

A review of the etiology, pathology, symptomatology and treatment of this condition.

SCHEPPEGRELL.

Syphilitic Chancre of the Right Tonsil and Upper Lip—PERROGON—*Gaz. Méd. de Nantes*, July 9, 1898.

A young soldier, who had infected himself for malingering purposes, developed simultaneously an ulcerated chancre of the right tonsil and posterior pillar of the palate and one of the upper lip. The secondaries developed rapidly long before the disappearance of the initial lesion.

SCHEPPEGRELL.

Present Methods for the Operative Treatment of Pharyngeal Adenoids—B. DELAVAN—*New York Med. Jour.*, October 29, 1898.

Ethyllic bromide is a useful anesthetic; chloroform is dangerous. In the hands of a skillful anesthetist, ether will prove more satisfactory. To secure an ideal condition for the operation, the patient should be in a state of complete anesthesia, and for the thorough removal of the growth, the blunt forceps proves the most effective instrument at our command.

[The objection to blunt forceps is that they frequently tear or loosen more tissue than they remove. This leaves crevices in which the discharges may be retained and where they easily decompose and become the seat of pathogenic micro-organisms. In a series of cases of acute otitis media consecutive to adenoid operation, examined by the reporter, with one exception only the operation had been done with blunt forceps.—W. S.]

SCHEPPEGRELL.

The Recurrence of Naso-Pharyngeal Adenoids after Operations for Excision—A. A. BLISS—*New York Med. Jour.*, October 29, 1898.

It is not improbable that cases of apparent recurrence are not true regrowths of the adenoid tissue, but a result of incomplete removal of the growth at the original operation. The inflammatory processes arising or continuing in parts which have remained, enlargements of these portions may cause symptoms of obstruction, pressure or irritation. A complete removal of the hypertrophied adenoid mass is therefore indicated in all cases.

SCHEPPEGRELL.

A Contribution to the Treatment of Adenoids—JOUSSET—*Le Nord Méd.*, September 15, 1898.

The Roser's position is advocated during the operation, a general anesthetic administered and the nasopharyngeal cavity tamponed with iodoform gauze.

SCHEPPEGRELL.

Adenoids as an Etiological Factor in Orthopedic Deformities—

F. S. COOLIDGE, Chicago—*Am. Med. Surg. Bulletin*, October 10, 1898.

Several instances of the nerve-irritation deformities presented themselves to the author. The theory brought forward in this connection is that the adenoid growths cause such a lowering of the general nervous vitality that they may be considered almost the direct cause of some of the atypical orthopedic deformities. Facial deformity of mouth-breathing is a common instance.

LEDERMAN.

III. ACCESSORY SINUSES.

Diagnosis of Empyema of the Frontal Sinus—GOULY—*Med. Mod.*, May 7, 1898.

The diagnosis is simple, especially when the affection is limited to one side. Severe local pain, nasal obstruction, and a discharge of pus from the nose or pharynx are sufficient. The more difficult cases are those in which these symptoms are not marked. The pain varies greatly: in acute frontal sinusitis it is sometimes frightful with retention of pus. It may be continuous and develop marked neurotic symptoms, or it may be intermittent. There is sometimes a limited swelling, occasionally extending to the orbit. Pain alone, however, is not pathognomonic. In maxillary sinusitis the pus is carious and fetid, while in frontal sinusitis it is creamy and almost without odor. Transillumination is difficult and frequently uncertain.

SCHEPPEGRELL.

Acute Frontal Sinusitis—H. L. SWAIN—*Yale Med. Jour.*, November, 1898.

This disease is more often seen since the prevalence of la grippe is with us.

When the sinus is attached on one side, the author has found that the same nostril is almost always narrow at its upper part. The canal becomes smaller by inflammatory changes and secretions are dammed up inside the sinus and can't escape. The surrounding mucous membrane becomes congested on account of venous stasis and granulation tissue and polyps form.

Hot saline douches are suggested. Seilers tablets in solution after the warm douches reduce the turgid turbinas. Cocaine to be applied by the physician, and followed by an application of the

supra-renal capsule extract. The latter can be used at home by the patient, and with its application the nostril can be kept clear for hours.

If any granulations obstruct the opening of the canal, they must be removed with a sharp scoop. The nose must be cleaned as often as the secretions demand removal.

In chronic cases an artificial opening must be made and a drainage tube inserted.

LEDERMAN.

Emphysema of the Antrum of Highmore—D. BRADEN KYLI—

Internat. Med. Mag., Vol. vii, No. 12, December, 1898.

The author defines emphysema of the antrum as "A condition in which there is accumulation of gas in the antral cavity." * * * "Although it is not commonly met with, it is of great importance and is often overlooked. The prime factor in its etiology is the generation of gases from a decayed tooth which communicates with the antrum." These may be confined from occlusion of the orifice, or through failing to escape through the ostium maxillare. Kyle has observed five cases. The age varied from childhood to past middle age. The symptoms vary, depending upon whether the antral opening is partially or entirely occluded. "There is usually a sense of intranasal pressure which may gradually increase. Pressure pain is dull; heavy, sickening headache is usually present and is markedly increased by stooping forward." * * * "If the antral opening is closed the accumulated gas will give rise to pressure symptoms the same as in confined suppuration of the antrum." * * * "The diagnosis is not always easy and may often only be made by exclusion. Lesions of the teeth may call attention to the genetic influence. The symptoms of dental irritation in this region with subsequent cessation of pain and later development of pressure symptoms in the cheek with ozena that is continued or interrupted, are always regarded as suspicious."

* * * The prognosis is excellent. The majority of cases recover spontaneously and rapidly after vent is given to the confined gas and proper treatment of the offending tooth or teeth, or the removal of necrosed bone. * * * The treatment, of course, consists in the evacuation of the confined gas, and this is usually better performed by the removal of the suspected tooth. Tapping of the antrum through the nose may be performed. * * * but as the cause of the accumulation of gas is a diseased tooth, treatment should be directed toward the removal of diseased tissue, and necessitates the skillful aid of the dentist."

EATON.

IV. LARYNX AND TRACHEA.

The Treatment of Singer's Laryngitis—HOLBROOK CURTIS, New York—*British Med. Jour.*, October 22, 1898.

By singer's laryngitis the author means any inflammatory condition of the larynx which temporarily prevents the satisfactory use

of the voice. It is important to ascertain whether conditions presented arise from dynamic or constitutional causes. Dynamic or mechanical causes may be illustrated by bad methods in singing, vomiting, spasm of the glottis, cough or strangulation. We must differentiate between an extravasation and a severe congestion. A hemorrhage beneath the mucous membrane covering the cord may give a rose-madder color. In congestion the cords may be red, but they never partake of the dark venous hue of an extravasation. Extravasation usually affects but one cord. Aphonia or disphonia due to hemorrhage is unaccompanied by pain and there is no lack of mobility of the cords which is often seen in acute laryngitis. Laryngitis from attrition does not present the general inflammation often surrounding tissue found in ordinary laryngitis. Vocal fatigue may occur, from physical or psychical causes, in which no congestion is apparent. It may be confidently said that singer's laryngitis, if not caused by cold, is, in seven cases out of ten, due to faulty production.

For several years the author has advocated the employment of tone exercises in the treatment of nodules, which equally apply to the treatment of the commencing stage of singer's laryngitis. The facility with which a worn-out or husky voice may be brought back by these simple exercises is my excuse for a reiteration of their efficacy.

In the first place, the exercises must be undertaken by a person whose musical ear is perfectly able to determine whether the vocal poise is absolutely correct, for if these exercises are attempted with an improper emission or focus they are worse than useless. The object primarily is to make the cords adopt a new method of vibration in respect to their segmentation, and this is accomplished by changing the color or overtone effects. To do this we must cover the tone and make the initial sounds seem to arise from the resonators of the face. The sound made with the mouth closed, and commonly written "humph," illustrates this as well as it can be described in print. Now, in the place which we call the focus of this sound we should start the purest and most musical note we are able, imitating the sound of a distant steam whistle, preferably on C'' of the staff for a soprano and C' for a tenor. This having been accomplished, we strive by a mental effort to bring this tone to the lips, the mental tone picture being transformed into the word "ma" as in "mah" or "maw," and with this labial tone thought dominant, the lips should be separated by dropping the lower jaw, the lips not sharing in the least in the muscular effort. If this tone has also taken possession of the buccal cavity—in other words, if the mouth is made a resonator and the tone is sufficiently far forward—the musical note or hum will be greatly accentuated by opening the mouth in this manner, and the sound will appear to have its origin upon the lips.

There is a very good test which may be applied to find out if this tone made is correctly poised. This is ascertained before opening the mouth by simply plucking the lower lip with the finger, and if the vocal poise is correct the mouth will give an

answering tone even louder than the initial hum, which is all the while going on in the nasal resonators. This nasal hum must be found persistent and without alteration in *timbre*, when the jaw and mouth are again closed. This represents the correct focus of tone, or a tone fullest in its complement of harmonics or overtones, and consequently richest in musical quality.

Another test for ascertaining the correct focus of any tone sung, is this: In singing any note in a song where our ear tells us the tone has gone backward from the lips and has lost its full resonance, simply place the forefinger between the lips, touching the angles of the mouth, and rapidly move the same up and down. If the tone is correctly produced the labial vibrations will correspond to the impinging of the finger on the lips respectively, but if the tone is too far back there will be no breaking of the tone by the finger into labial impulses or beats. By these simple means, which are verified by Koenig's apparatus for tone analysis, in that the tones produced by the correct poise are found richer in overtones or harmonics, we are instantly able to tell our patients whether they are singing in a manner to injure their cords or otherwise.

These exercises represent the most natural and free light gymnastics for the cords, and every tone sung in the manner above described becomes an exercise for the intrinsic muscles of the larynx under least possible tension. They seem to act as massage does on an injured and inflamed extremity. Tones sung in this manner, which illustrates forward production so-called, have the greatest possible number of overtones, and hence are more sympathetic in quality and have greater carrying power. The employment of these exercises, aside from restoring injured conditions due to overstrain, leads the patient unconsciously into a method which, while strengthening the power, will enormously improve the flexibility and charm of the voice.

Curtis has ceased long ago to employ strong astringent applications to the cords of singers. In cases of painful laryngitis he uses an extract of the suprarenal capsule which, applied to the mucous membrane of the larynx, is very soothing in effect. In the nose, a ten-minute application causes a marked blanching, much more pronounced than the pallor of cocaine. He has employed it frequently in mild laryngitis with marked benefit. WATSON WILLIAMS.

Sudden Death from Compression of the Trachea by the Enlarged Thymus—LONGA—*Med. Review of Reviews*, October 25, 1898.

A three and one-half months old child, practically healthy, was found dead and cyanotic one morning without any preliminary symptoms. Autopsy showed no other lesion than an enlarged thymus gland, which nearly surrounded and plainly compressed the trachea. During life there had never been the least sign of embarrassed respiration. The so-called "status thymicus" or lymphaticus, may not only be a direct uncomplicated cause of death, but may act as a contributory cause. LEIDERMANN.

Paracinesis of the Vocal Cords, with Marked Aphonia and Grave Respiratory Difficulty Simulating Stenosis of the Larynx and Trachea—JANKELEVITCH—*Revue Int. de Rhin., etc.*, June, 1898.

The patient, a woman forty-five years, was found to have incoördination of the vocal cords. The respiratory movements were inverted. Phonatory and respiratory exercises were instituted under control of the mirror, vibratory massage practiced and injections of mentholated vaseline made, which were followed by marked improvement.

SCHEPPEGRELL.

A Case of Bronchitis and Pneumonia caused by the Inhalation of the Filling of a Tooth broken in Extraction—CHAS. O'DONOVAN—*N. Y. Med. Jour.*, November 26, 1898.

A woman of forty-six years, after the extraction of a tooth under nitrous oxide, developed a bronchitis which spread in a few days over the entire lower third of the right lung. A distinct dull spot soon developed at the site of the original focus of inflammation.

The symptoms continued until fifteen weeks later when, during a severe paroxysm of coughing, she spat up the usual purulent and bloody mucus, including a piece of amalgam filling from the tooth. A complete though delayed recovery took place.

SCHEPPEGRELL.

Early Symptoms of Pressure upon the Vagus and Recurrent Laryngeal Nerves—DAVID NEWMAN—*Jour. of L., R. and O.*, October, 1898.

In some cases one of the earliest symptoms by pressure of an aneurism or of a mediastinal tumor, is *sudden and paroxysmal dyspnea accompanied by laryngeal stridor*. During such an attack an examination of the larynx is impossible, and when the attack is passed, the parts differ but little from the normal appearance. This negative fact is of highest value, for if no local or central lesion exists, the presumption is strongly in favor of aneurism or mediastinal tumor, in a patient passed middle life.

Attention is called to the anatomical origin of the laryngeal fibres of the vagus. Semon states that in all progressive organic lesions of the centers or trunks of the motor laryngeal nerves, the abductors of the vocal cords succumb much earlier than the adductors, and although a large number of such cases of progressive organic disease acting upon the whole of the nerve trunk have been recorded, not a single case or specimen has yet been demonstrated which exhibited the opposite order of events. Semon further states that paralysis of the abductors is almost invariably bilateral and due to functional disorders, probably cortical, while unilateral abductor paralysis is almost always the result of pressure upon the recurrent laryngeal nerve. The author does not believe that this law is absolute.

The characteristic cough in cases of pressure upon the laryngeal nerves sometimes aids the examiner to establish a proper diagnosis. The cough is hoarse and imperfect and is essentially a paralytic phenomenon. It is brassy in quality.

The speaking voice may be little altered as compensation of the opposite muscles occurs. In some cases, however, marked disturbance of the voice is heard.

When taken in conjunction with stridor and imperfect cough, alterations in the voice may materially assist in forming an early diagnosis of aneurism or mediastinal tumor. LEDERMAN.

Remarks upon the Surgical Treatment of Malignant Diseases of the Larynx—D. BRYSON DELAVAN, New York—*four. Am. Med. Assoc.*, March 12, 1898.

The writer emphasizes the importance of a thorough knowledge of the parts to be operated on, by a competent surgeon. That certain men should fit themselves especially for this kind of work, and that the indiscriminate performance of capital operations upon the larynx should cease.

He describes three varieties of operations employed in the treatment of this affection.

1. Thyrotomy, with or without partial laryngectomy.
2. Complete laryngectomy by the method adopted in Solis-Cohen's case.
3. Complete laryngectomy in cases of extensive laryngeal disease with glandular involvement.

The writer believes that the lymphatic area about the larynx should be cleaned out whether they can be felt or not. He is also of the opinion that a preliminary tracheotomy several days prior to the operation is to be desired. BISHOP.

Tracheocele following a Seance of Suspension—SABRAZES AND CABANNES—*Revue Hebd. de Laryngologie, etc.*, November, 1898.

During the twentieth suspension for tabes, a patient sixty-five years old observed on the right side of his neck a tumor which became swollen with every effort. It gradually increased in volume.

The tumor was punctured and showed that it was filled with air. It was packed with gauze. A laryngo-tracheal examination could not be obtained in order to determine the point of communication with the trachea. The patient was found to be tuberculous. A microscopic examination showed bacilli in the sputum.

The authors believe that this is the first case on record of a tracheocele as an accident during suspension. SCHEPPEGRELL.

Perichondritis of the Larynx—G. L. RICHARDS—*The Med. Times and Register*, November, 1898.

In a slowly developing case of this disease, the diagnosis must rest between syphilis, carcinoma and tuberculosis. The destructive process can be as fatal in syphilis as in carcinoma.

Tracheotomy is to be performed whenever necessity arises. Anti-syphilitic should be tried, as it may hold the process in check, while the necrosed tissue is being casted off. When dyspnea is present, the tracheotomy should be performed as low down as possible.

LEDERMAN.

Cases Illustrative of Treatment of Different Forms of Aphonia, due to Laryngeal Lesions—F. WOODBURY—*Phila. Polyclinic*, September 10, 1898.

A woman of twenty-nine years suffered from hoarseness. She had previously been operated on for a laryngeal papilloma. A laryngoscopic examination showed a small movable prominence over the left arytenoid cartilage, and another at the middle of the right vocal cord, evidently a recurrence of the tumor previously removed. Ten grains of magnesium sulphate were administered three times daily, this resulting in a cure.

The second case, a girl of fifteen years who suffered from chronic laryngitis, suddenly developed a slight effusion of blood in the left vocal cord. A spray of phenazone, combined with small doses of mercuric chloride, followed by potassium iodide resulted in a cure. The third case was one of acute laryngitis, this being benefitted by correcting a nasal hypertrophy.

SCHEPPEGRELL.

Abscess of the Vestibule of the Larynx Opened by a Guarded Bistoury—M. DELSAUX—*Jour. Laryn., Rhin. and Otol.*, Oct. 1898.

This disease was seen in a man sixty-two years of age. He suffered for four days with lancinating pains in the right side of the neck. Dyspnea and dysphagia were annoying symptoms. The laryngoscope showed an elongated swelling on the right lateral wall of the pharynx; the right vocal cord was hidden by the edema. The abscess was incised in the center with a guarded bistoury and recovery was rapid.

LEDERMAN.

Report of a Case of Fibro-Lipoma of the Larynx—F. W. HINKEL—*New York Med. Jour.*, October 29, 1898.

A woman of fifty-five years had had a tumor removed from behind the tongue in 1883, and recurrences of same in 1893 and 1894. A laryngoscopic examination showed on the left margin of the epiglottis a pinkish-white tumor of flabby appearance. The tumor felt soft to the probe, but it proved to be so tough that the wire of the snare was unable to cut it, and it had to be removed with curved scissors. A recurrence of the tumor was removed three years later. Microscopic examination showed it to be a fibro-lipoma.

SCHEPPEGRELL.

Two Cases of Malignant Disease of the Vocal Cords; Thyrochondrotomy; Non-Recurrence in One Case after Two Years—HERBERT TILLEY, M.D., B.S., Lond.; F.R.C.S., (London)—*British Med. Jour.*, October 22, 1898.

The first case occurred in a male, aged sixty-five, whose only symptom was hoarseness, which had persisted for fourteen months. The right vocal cord was found to be thickened, ulcerated and congested, the upper edge of the ulcer being thickened. The cord was immobile on phonation. There were no enlarged glands in the neck. The left vocal cord and both vocal processes were normal. The growth was removed on September 15, 1896, and proved on histological examination to be a typical squamous epithelioma.

The second case occurred in a male, aged forty-nine, who complained only of hoarseness of two months' duration. Laryngoscopic examination revealed a whitish-gray nodular thickening occupying the anterior fourth of the left vocal cord. By the finger the growth was felt to be hard and immobile. On phonation the cord was almost completely immobile. A fragment removed for diagnostic purposes was found to be suggestive of epithelioma, and, after removal, further examination proved it to be a typical squamous epithelioma. The operation was performed on February 21, 1898. The man made an excellent recovery, leaving the hospital in eleven days, and there was no appearance indicative of recurrence in October of the same year.

In both cases the external wound was sewn up (excepting at the lower end) at the end of the operation.

The author emphasizes the value of digital palpation where practicable, in the diagnosis of malignant disease of the larynx.

WATSON WILLIAMS.

Foreign Body in the Larynx and a Modification of Kirstein's Autopsy—F. E. INGALS—*New York Med. Jour.*, September 17, 1898.

A boy of three years had drawn a shoe button into his larynx four weeks before, since which time he had been aphonic. An attempt to examine the larynx by means of Kirstein's autopsy failing, a laryngo-tracheotomy was performed, and through this the foreign body was pushed upward into the mouth.

An interesting circumstance noted in this article is the fact that the author used a vaginal retractor for examining the larynx before the publication of Kirstein's well-known method of autopsy.

SCHEPPEGRELL.

Four Consecutive Cases of Tracheotomy for Laryngeal Diphtheria—FRANK A. NYULASZ AND CHAS. J. TROOD—*Australasian Med. Gazette*, Vol. xvii, No. 10, Oct. 20, 1898.

The authors' operations were performed in every instance at a late stage of the disease, and occurred in private practice. Three

of these, in which a subsequent injection of antitoxin was made, recovered; one, for which no antitoxin could be obtained, was fatal. The ages varied from eleven months to four years. The authors are of opinion, from their past experience of tracheotomies done under like circumstances, that the antitoxin was a material factor in saving the cases that recovered. A full account of each case is given. EATON.

Coin in Larynx—Tracheotomy—Recovery—D. J. GIBB WISHART
Canada Lancet, Vol. xxxi. No. 2.

The coin, a ten-cent piece, was lodged in the vocal cords, covering their anterior half, and almost concealed by the swollen ventricular bands. The operation was performed under local anesthesia (Schlich's solution), and this proved entirely satisfactory.

GIBB WISHART.

Tracheotomy by the Aid of Local Anesthesia—THOS. H. MANLEY—*four. of Eye, Ear and Throat Diseases*, Vol. iii. No. 4, October, 1898.

Seven years ago it became necessary for the author to perform tracheotomy on a young man for acute edema of the larynx. On that occasion the struggles, the strangling and desperate degree of asphyxia under a pulmonary anesthetic were so great and the patient's escape from death so narrow, that it was believed that the great difficulties in the way of tracheotomy were not inherent to the operation, but upon the pulmonary anesthetic. Since that time he has performed tracheotomy four times under the local influence of cocaine analgesia. There is an extraordinary difference in the simplicity and security between this and pulmonary anesthesia. "The patient sits up with the head well thrown back, facing a good light. Cocaine being a hemostatic of great energy, hemorrhage, the most troublesome complication, is but trifling. A free vertical incision divides the integuments and deep fascia. As the isthmus of the thyroid is reached, the scalpel is turned on its back and, according to the plan of Dawson, the tissues are divided through by tearing rather than by cutting. The trachea exposed, is opened from below upward.

"I have employed hypodermic cocaineization in one infant who had stenosis from a retrotracheal abscess. But as the drug acts with lethal effects on infants, they are difficult to control, and as the anatomical arrangement is such as renders tracheotomy extra hazardous with them, probably we must continue to employ pulmonary anesthetics." The author believes, however, that cocaine-tracheotomy should entirely displace pulmonary anesthetics in all adult cases, for with ordinary precautions there are practically no dangers in its employment. His experience has taught him that as regards the substitution of Schleich's mixture, he agrees with Reclus, who, after extensive tests, declares that Schleich's mixture offers no advantage over cocaine hypodermatically, but, besides, in consequence of the augmented volume it is necessary to use.

and its slowness in action when haste is imperative, is much inferior. Dr. Manley has found that a few repeated doses of alcoholic spirits by the mouth when using cocaine serves the double purpose of rendering anesthesia more effective, and of neutralizing and entirely inhibiting the lethal action of the drug. In highly neurotic females one-sixth of a grain of morphine may be blended and taken with the spirits.

EALON.

Total Laryngectomy ; a Modification of the Operative Procedure.

—DURET *Jour. des Sciences Méd. de Lille*, July 23, 1898.

The author has twice extirpated the larynx for cancer. The first patient died twenty-five days afterward from pneumonia due to the introduction of food into the respiratory passages, and the second patient succumbed from a local ganglionic recurrence at the end of the seventh month. The modification referred to consists of attempting the closure of the pharyngeal fold by a continuous suture to the periosteum of the hyoid bone.

Dr. Brindel (*Revue Hebdomadaire de Laryngologie*, October 29, 1898), in commenting on this article, states that laryngectomy is an operation which should be abandoned; that thyrotomy should be substituted for it whenever there is still time, and that simple tracheotomy should be done when thyrotomy no longer offers any chance of success.

SCHUPPECKELL.

Excision of Larynx and Part of Esophagus —THOMAS WALLACE

British Med. Jour., November 26, 1898.

The growth was attached to the left vocal cord and extended across the arytenoids to the right side in a married woman aged forty-five.

Patient, a healthy-looking woman, complained of difficulty in breathing, inability to swallow solid food and pain across throat and extending into left ear. Family history: she had one living child and ten premature births. A six-week's antispecific treatment had yielded negative results.

Patient was anesthetised with chloroform and a low tracheotomy first done, and a Trendelenburg tube inserted, through which the administration of the anesthetic was continued. A vertical incision was made in the middle line from the hyoid bone down to the tracheotomy wound and a transverse incision at the top of this and the flaps turned downward and outward.

On dissecting out the larynx its posterior wall and the anterior wall of the esophagus were both found so infiltrated with disease they could not be separated. The trachea was then cut through, the two upper rings, together with the cricoid were dissected up off the esophagus and the whole larynx removed. The pharynx and anterior wall of the esophagus a little lower than the cricoid cartilage were infiltrated with disease. These were completely dissected off the front of the spine from immediately behind the hyoid to the cut end of the trachea, leaving the prevertebral Muscles quite bare. The growth was completely removed and no enlarged glands

were seen or felt. The upper end of the trachea was stitched to the skin wound and the esophagus similarly treated at a slightly higher level. The transverse incision was closed with stitches and sealed with celloidin, a large gap was left in the middle line which was plugged with iodoform gauze and a rubber tracheotomy tube was fixed in the trachea.

The patient had several complications after the operation, dyspnea at times. Some glands became affected and were removed, erysipelas, then difficulty in reintroducing the tracheotomy tube after removal for cleansing, an abscess formed on the left side of the neck and finally about five months after the operation she suddenly became cyanosed while the tube was out to be cleansed and died before it could be reintroduced.

The post-mortem examination revealed a recurrence of the growth with pouches behind the upper end of the trachea accounting for the periodical difficulties in reintroducing the tube, also a flap of mucous membrane and growth was found at the upper end of the trachea which no doubt obstructed the tube. The recurrence had extended round both carotid sheaths and had ulcerated almost through the right carotid artery.

F. W. FOXCROFT.

Early Diagnosis in Whooping Cough—H. L. WAGNER—*New York Med. Jour.*, October 8, 1898.

The diagnosis may be made at once by a bacteriologic examination of the nasal secretion. The normal mucous membrane of the nose contains few bacteria, while in whooping cough we find a large mass of bacteria of one kind, a natural pure culture of "pol-bacteria" (Czaplewski and Hensel).

SCHEPPEGRELL.

Laryngeal Tuberculosis at the Loomis Sanitarium—W. F. CHAFFIN—*New York Med. Jour.*, September 10, 1898.

A clinical history of nineteen cases in which the results were as follows: Laryngeal ulcerations healed, eight cases; laryngeal ulcerations improved, two cases; laryngeal ulcerations unimproved, two cases; laryngeal thickenings improved, seven cases. In addition to the advantage of climatic conditions at the sanitarium and the systemic treatment, the local treatment consisted principally of the use of Dobell's solution, peroxide of hydrogen, nitrate of silver and lactic acid.

SCHEPPEGRELL.

A Note on the Surgical Treatment of Lupus and Tuberculosis of the Larynx in Connection with Tracheotomy—E. L. SHURLY—*New York Med. Jour.*, September 10, 1898.

In view of the possibility of complications in the treatment of laryngeal lupus and tuberculosis by curettement, incisions, etc., and thus endangering the respiration, the author advises preliminary tracheotomy. After this operation, the local treatment may also be more energetic. In extensive pulmonary disease, tracheotomy is contraindicated, as the tube seems to interfere with expectoration.

SCHEPPEGRELL.

The Etiology and Treatment of Laryngeal Tuberculosis—P. S.DONNELLAN—*Therapeutic Gazette*, November 15, 1898.

Infiltration is usually the earliest local sign. It generally begins in the inter-arytenoid space, or in the epiglottis. In patients whose profession causes them to use the voice to great extent, the vocal cords and ventricular bands may become first affected.

The ulcers are superficial and "mouse-nibbled" and are the result of breaking down of infiltrated areas.

Cough is almost always present, and causes much discomfort.

Hemorrhages from the larynx are rare, but may occur after a severe paroxysm of cough, caused by a rupture of one or more laryngeal capillaries. Dysphagia is the most distressing symptom.

Constitutional measures must not be omitted in this disease. Abundance of animal food should be taken. (Where practicable the cough can be relieved by insufflating morphine, gr. $\frac{1}{4}$, with 10 grains of powdered acacia every four or six hours. Codein is also recommended. For the night sweats 15 grain doses of camphoric acid, taken an hour before bed time, is suggested. Aromatic sulphuric acid, with paragoric, if painful diarrhea exists. Cocaine in the form of a spray, or local applications of a four per cent solution for the dysphagia.

Local applications of lactic acid and submucous injections of guaiacol have proven of great service to the author.

LEDERMAN.

The Pathogenesis and Earlier Clinical Evidence of Laryngeal

Tuberculosis—W. JOHNSON HORN—*Jour. Laryn., Rhin., and Otol.*, October, 1898.

Under the microscope the earliest changes noted were in the lymphatics, consisting of a proliferation of the parenchyma of the acini and ducts, with the formation of masses of small, round cells, distending and choking the ducts and obliterating the glands, the adjacent and superficial structures at first remaining intact. These changes have been noted in the lymphatics situated in the submucous layer of the walls of the ventricles when a careful microscopic examination of the entire larynx had failed to reveal changes in lymphatics in other parts. Though these changes may arise from a catarrhal process, the author has been able to demonstrate the tubercle bacilli in some of the lymph masses, and was of the opinion that they acted as an irritant and caused a cell proliferation. The tuberculous process commences in those parts rich in lymphatics, as the inter-arytenoid space, the posterior third of the cord, the ventricular band, and the epiglottis.

A fine crenating or fringing occurs upon the folds of mucous membrane in the inter-arytenoid space, in the early stage of a laryngeal involvement. It is often met with in pulmonary disease. A slight edema of the laryngeal mucous membrane is often seen.

LEDERMAN.

V. EAR.

The Hygiene of the Ear—C. W. HOPES—*Dunglison's C. and C. Record*, November, 1898.

Usages which cause a malformation of the auricle should be avoided. Boxing or pulling the ears frequently produce much harm. Inexperienced attempts at removal of foreign bodies from the canal cause unpleasant results. Catarrhal conditions of the nose and throat should not be neglected, adenoid vegetations must be removed. Careless use of the nasal douche leads to disease of the middle ear. The continued use of quinine in large doses is apt to cause nerve trouble. A small pledget of cotton in the external canal will serve to modify sounds, to those whose occupations expose them to loud noises or explosions. LEDERMAN.

The Relation between Dental and Auditory Affections—M. A. PONT—*Lyon Med.*, October 23, 1898.

Certain ocular and auditory troubles may supervene from many dental causes—Operations on the teeth (extraction, insertion of crowns, etc.) the eruption of temporary or permanent teeth, dental affections (periostitis, pulpitis, simple caries). The auditory conditions, more frequent in affections of the teeth, are pain, hyperesthesia of hearing or deafness. These complications when due to pulpitis or periostitis usually disappear after the cure or extraction of the affected tooth, provided the intervention shall have been early enough. SCHEPPEGRELL.

Deafness from Mumps—HAL FOSTER—*The Med. Herald*, Vol. xvii. No. 10, October, 1898.

Foster describes the clinical picture of deafness as a result of mumps, and points out that the deafness is only discovered in young children, when they begin to cease to talk, those between the ages of two and five nearly always becoming mutes. The writer has visited several state institutions for the deaf, and has always found one or more of the inmates whose hearing has been destroyed by mumps, and maintains that every child having the disease is in danger of complete deafness. He believes local antiseptic treatment of the throat and nose will aid materially in lessening the chance of ear complication. For the treatment of the deafness he favors mercurial inunction, tinct. gelsemium and nitrate of pilocarpine and absolute rest in bed. EATON.

Operative Interference on the Drum and Ossicles in Chronic Middle-Ear Suppuration—A. H. CHEATLE, F.R.C.S., London—*Practitioner*, October, 1898.

In a previous study (*Practitioner*, May 1897) the question of operative interference in non-suppurative disease was discussed and in the more recent "Comparative Study" by Cheatle, the views of

some of the leading aural surgeons, viz.: Dalby, Cumberbatch, Hovell, Laŵ, Harvey, Marmaduke, Shield, Milligan, Bronner, McBride, Barr, Dench, St. John Roosa, Politzer, Ludwig, Reinhard, Zaufal, Hartmann, Bezold, Barth, Kirchner, Steinbrügge, Gellé, Löwenberg, Luc, Moure, Lermoyez, Miot, Gradenigo, Ferreri, Cuzzolini, Schmiegelow, Delstanche, Guye, Barrett are cited and taken as the basis for the author's conclusions. The very comprehensive list of authorities cited, suffice to indicate the care taken by the author in formulating definite rules for the treatment of the conditions discussed which may be regarded as fairly representing the best practice of the day.

The subject naturally falls under two headings:

(a) Operations undertaken to remove the cause of the discharge.

(b) Operations undertaken to improve the hearing, after the discharge has ceased.

It will be taken for granted that all operations are performed under thorough antiseptic precautions.

(a) *To remove the cause of the discharge.*

We may first clear the ground by saying that ordinary means of treatment, which include thorough purification and packing, curetting, enlargement of perforations, syringing, dry treatment, etc., must first be given a fair trial, and also that, if there are any signs or symptoms of antral or further extension of the disease, the radical post-aural operation is demanded, the drum and ossicles being then dealt with.

There remain, then, those cases which have resisted thorough ordinary treatment, but in which there are no signs or symptoms of extension. These must be divided into three groups, the division depending on the position of the perforation:

I. In Shrapnell's membrane.

II. In the posterior-superior quadrant of the drum.

III. In some other part of the drum.

I. Persistence of discharge with a perforation in Shrapnell's membrane is the most important, for it indicates some chronic trouble in the attic, which space is in proximity to the middle fossa of the skull, and opens posteriorly into the tympanic antrum. The condition, in fact, is an hourly menace to life.

This persistence of attic disease may be due to a variety of causes, the chief being caries of the head of the malleus, body of the incus, or both; caries of some part of the attic walls; collections of cholesteatoma, inspissated pus, or granulation tissue. Under the circumstances indicated, excision of the remaining part of the drum with the two larger ossicles is demanded. Removal of the outer attic wall or its remains has been proposed to effect free drainage without removing the ossicles, but its use lies rather as an adjunct to the ossiculectomy.

Improvement in hearing to a marked degree is often obtained, and the reason is obvious; for if the ossicular continuity is cut through by caries of the malleus and incus, or hampered by the in-

crease of cholesteatoma, pus or granulation tissue in the attic, the remains of the drum, malleus and incus simply act as obstructions to sound waves, their removal allowing the waves to reach the head of the stapes directly. Chronic head-ache, tinnitus and vertigo are occasionally relieved.

If after removal of the remains of the drum, carious ossicles and outer wall, followed by thorough local treatment, a cure is not effected the radical post-aural operation is demanded.

II. Perforation in the posterior-superior quadrant with persistent discharge is generally associated with caries of the incus, commencing at the descending articular process. The perforation may extend downwards or upwards, or in both directions, the head of the stapes being often clearly exposed to view, with pus coming from under the upper edge of the perforation.

A cure of these conditions is often produced by removing the malleus and remains of the incus and drum.

III. Perforation in some other part of the drum rarely demands removal of the ossicles. Retention of cholesteatoma, inspissated pus, etc., may render it necessary, but simple incision is generally all that is needed. Caries of the tip of the handle of the malleus is a fairly frequent condition, but is, as a rule, amenable to ordinary treatment.

Total loss of the membrane, with entire necrosis of the malleus and incus, is sometimes seen as a result of a virulent infection, as in scarlet fever. The ossicles may syringe out under these circumstances, or require simple picking out.

Not unfrequently the drum is represented only by some remains of Shrapnell's membrane attached to the short process of the malleus, the handle of which is cleanly dissected out, or with caries of its lower part, the caries often extending up to the short process. Caries of the incus is often present in this condition. Removal of the remains of the drum, malleus and incus is indicated if ordinary means do not effect a cure.

(b) For improvement of hearing after the discharge has ceased.

In considering this part of the subject it is necessary to classify the changes which may be present in the middle ear after the discharge has ceased:

- I. Solution of ossicular continuity.
- II. Adhesions.
- III. Flaccid citatrices.
- IV. Retained epithelial deposits, etc., behind the drum.

Before considering these in detail we can again clear the ground by saying that operative interference is contra-indicated if the bone conduction is not good, in other words, if there is any implication of the labyrinth: that if only one ear is deaf, nothing need be done unless the patient's occupation or pleasure demands bilateral hearing.

I. Solution of Ossicular Continuity.—In dealing with attic sup-puration with a perforation in Shrapnell's membrane, it was pointed out that if the articulation of the head of the incus is rendered

functionless by caries, etc., improvement in hearing is often obtained by removal of the remains of the drum, malleus and incus; the same, of course, holds in healed trouble in this region. To make out as far as possible as to whether the drum and ossicles have lost their conducting function—and this test is a valuable one in other conditions than that now under consideration—stroke the drum very gently with a fine probe or camel's-hair brush, etc. If the function is abolished the patient will feel but not hear it, or the noise produced will be very much less than it should be. The other and most usual place for solution of continuity is at the incus and stapes joint, a condition which does not produce very marked deafness unless there are adhesions about the stapes, oval window, etc. An artificial drum placed on the exposed head will often help in these cases.

II. Adhesions.—These, as might be expected, may be in all sorts of situations; but they may be broadly divided into those binding down or hampering the drum, malleus and incus, and those more deeply situated round the stapes, oval and round windows. Both the superficial and deep varieties may exist together, and it is impossible, as a rule, to detect the deeper unless the inner middle-ear wall is brought into view either by disease or by operation. With regard to the *superficial*, it may be said at once that simple division only produces a temporary improvement, the hearing getting as bad as ever when the incision heals. The best thing to do, if more or less forcible inflation or injection of fluids fail, is to remove the remains of the drum, malleus and incus, and so explore the head of the stapes. If improvement does not occur then, even if an artificial drum is useless, there are deeper adhesions, etc., which should be dealt with. Attempted mobilization of the stapes will help in clearing up this point with regard to the *deep* adhesions.

Those which pass from the head and crura of the stapes to surrounding parts can often be seen and divided with a fine knife close to the ossicle, which can then be moved with a suitable probe. The stapedius muscle can also be divided.

If the stapes remains immobile after division of all get-at-able adhesions, the question comes whether removal of the bone, if possible, will improve matters; and if the oval window occluded, whether it can be further attacked. These appear to be questions which require further investigation. Adhesions occluding the *round* window should be divided, as improvement undoubtedly has been observed as a result.

III. A flaccid cicatrix alone rarely leads to very great impairment of hearing. Multiple incisions give benefit by the tightening which is produced by the subsequent contraction (Politzer.) If deafness is extreme, adhesion in some part will be present and the case may be dealt with as such.

IV. Retained matter behind the membrane requires only incision of the drum and removal. If incisions are not sufficient, it becomes a question whether removal of the remains of the drum and malleus should not be performed. P. WATSON WILLIAMS.

The Treatment of Acute Otitis Media—II. LE MARCHADOUR—
Revue Int. Méd. et de Chir., September 25, 1898.

Avoid or correct the infection of the middle ear by proper treatment of the pharynx—the usual point of infection and reinfection. Reach the infected cavity and give issue to the pus by the accessible point, the tympanic membrane.

At first the acute otitis media should be treated by the instillation of carbolized glycerin, one to twenty per cent. into the canal. In cases in which pain continues, a myringotomy is advised with due aseptic precautions. The Politzer bag should be used to clear away the pus and to prevent the rapid healing of the perforation. The washing of the canal should be done by the physician himself, and with boiled water only.

SCHEPPEGRELL.

Pyemic Phenomena in the Course of an Acute Otitis Media in an Infant—E. RIMINI—*Bollett. delle Malatt. dell' Orecchio*, November 7, 1898.

A free otorrhea and mild fever had developed on the second day of an otitis media. When these seemed to be improving and when the general condition had been satisfactory for two days, a strong fever suddenly developed, with vomiting and rigors. The otorrhea at the same time subsided, the fever, however, remaining at the same degree in spite of an artificial perforation which was made in the superior posterior segment of the drum. The fever was characteristic of septic absorption. On the third day the temperature fell to the normal, when some hours later the patient had a severe chill which lasted forty-five minutes.

Having observed a prominence on the superior posterior segment, the author repeated the paracentesis, which was soon followed by marked improvement of all the symptoms. The author believes that the pyemia was due to the penetration of pus into the mucous membrane of the middle ear. A culture of the pus showed the staphylococci pyogenes albus.

SCHEPPEGRELL.

Threadworms in the Ear—KOEDEL—*N. Y. Med. Journ.*, July 30, 1898.

A girl of thirteen years, after a violent attack of retching, choking and sneezing, passed a threadworm more than a finger in length, the worm making its appearance at the external auditory canal, whence it was removed by the fingers. The child had suffered for five days from an otitis media purulenta, as a sequel to an attack of pneumonia, and the drum membrane was undoubtedly already perforated and only served the worm as a means of exit. Before the parasite was passed, the child had been rolling around in its bed and loudly shrieking for the space of an hour. Eight days later the perforation in the drum membrane had closed.

SCHEPPEGRELL.

Does Tympanotomy and the Removal of the Incus Arrest Progressive Hardness of Hearing—CHAS. H. BURNETT—*Phil. Polyclinic*, July 23, 1898.

The cases of progressive hardness of hearing operated upon by tympanotomy and the removal of the incus by the author number sixty-one. Most of these patients heard but little at the time they were operated upon, and little or no improvement followed, none, however, being made worse. The real object of the operation in most cases was to relieve tinnitus and ear vertigo, and these were alleviated or banished in all cases, and the progress of the deafness seemed to be arrested.

SCHEPPLIGRELL.

Catheterization of the Eustachian Tubes—T. M. HOVELL, F. R. C.S.E., London—*British Med. Jour.*, October 22, 1898.

As the dimensions of the inferior meatus vary according to the size of the superior maxillary bones, the presence or absence of spurs, deviations of the septum, etc., it is necessary for aural treatment to be provided with catheters which differ respectively in the gauge of their stem and in the length of their curve. At the present time, there is not a nomenclature which enables one practitioner to tell another the precise gauge and curve of a catheter required for the treatment of a particular case, and in order to overcome this serious inconvenience Hovell proposes: 1. That the gauge of Eustachian catheters shall be that of the French catheter gauge, which is well known and graduated on a definite scale. 2. That the length of curve shall be expressed in millimeters, the number indicating the distance which the curve separates two parallel straight lines.

WATSON WILLIAMS.

On Curetting for Suppuration in the Middle Ear, Illustrated by a Case of Supposed Malignant Growth—G. JACKSON—*Jour. Laryn., Rhin. and Otol.*, October, 1898.

The patient, a female, fifty years of age, had symptoms of labyrinthine hemorrhage, produced by violent sea-sickness, which left her with tinnitus and loss of bone conduction on the left side. She met with an accident, and her ears got filled with lime and mortar. When seen by the author, symptoms of chronic suppuration with granulation tissue were present.

This tissue was removed with the curette, but again returned. A second operation was performed, but, in spite of subsequent treatment, the tissue reappeared. The third time it was cleaned, together with removal of some diseased bone in a sinus behind the ear. It did not return after the third attempt. Under the microscope a portion of the growth was pronounced granulation tissue, probably of a tubercular nature. A larger piece was found to contain evidence of malignancy.

Cancer of the middle ear is rare, and if such a disease had invaded the bone, an operation would hardly prove successful.

LEDERMAN.

Indications for Petro-Mastoid Evidement for Dry Chronic Otitis of the Middle Ear—*Presse Méd.*, May 7, 1898.

Operate only when the tuning-fork or acoumeter placed on the skull can still be distinctly heard. Operate early before the lesions spread, and only one ear at a time, selecting the ear with the poorest hearing. The improvement often extends to the non-operated ear. The lower tones are seldom improved, the intervention affecting especially the higher tones and causing the gradual subsidence of the subjective noises. It should not be attempted on elderly persons. It requires more or less complete integrity of the fenestra, but every subject whose aerial audition of the higher tones is not too much diminished should profit by the intervention.

SCHEPPEGRELL.

Case of Otitic Cerebellar Abscess successfully Treated by Operation—PERCY JAKINS—*Jour. Laryn., Rhin. and Otol.*, Oct. 1889.

The patient was thirteen years old, and had suffered from a chronic suppurative otitis media with polypi.

When seen by the reporter he was semi-unconscious; head well retracted: pulse, 64; temperature, 98°. Two hours afterwards the pulse was 46. Chloroform was given and mastoid opened; an incision was also made into swelling on posterior meatal wall, which permitted considerable pus to find an exit.

Later an abscess was found in the cerebellum, which was evacuated. The patient made an uninterrupted recovery.

LEDERMAN.

A Case of Sarcoma of the Middle Ear—G. L. CHEATLE, F.R.C.S.
London—*British Med. Jour.*, October 22, 1898.

Case of a female child, aged two and one-half years. When first seen, the child had a large diffuse fluctuating red, hot and painful swelling behind the pinna on the left side, and an elliptical, tough, pedunculated polypus filled the external auditory meatus. As there was a history of a discharge from the ears for some months past, the whole condition appeared to be the result of an infective inflammation, beginning in the middle ear and spreading from there to surrounding parts. Upon opening this swelling pus, granulation tissue and caries of bone appeared, so that there seemed to be no reason to alter the diagnosis. About three months later the child died, the disease having meanwhile developed so that at the *post-mortem* examination, the tumor was nearly as big as the child's head, and involved the uppermost of the deep glands of the neck, which pushed outwards the overlying structures, and in parts actually involving them in the malignant growth. Through an opening in the temporal bone that involved the mastoid lower squamous regions and the roof of the middle ear the growth appeared and occupied the middle fossa of the skull as a rounded, lobulated mass about the size of three chestnuts pressed closely together. Over the intracranial surface of the growth the dura mater was lost, the overlying temporo-sphenoidal lobe was much indented, but did not form any part of the malignant growth.

WATSON WILLIAMS.

A Case of Septic Thrombosis of the Lateral Sinus due to Streptococcus Infection; Secondary Abscesses; Operation; Recovery

—H. A. BALLANCE—*Jour. Laryn., Rhin. and Otol.*, October, 1898.

This complication occurred in a pregnant woman, twenty-four years old. There was a profuse discharge from the left ear, with marked swelling of the posterior canal wall and granulation tissue lining a discharging sinus at this site. Double optic neuritis was present, more intense on the left side. Chills with fluctuating temperature also appeared.

Considerable diseased bone was removed at the operation. The internal jugular vein was ligated in two places and incised. It was not thrombosed, but collapsed owing to an obstruction of the blood current higher up. Metastatic abscesses formed in the shoulder, tonsil and leg.

Streptococcus antitoxin was injected with good results.

The conditions met with in the course of the disease were sinus thrombosis, with subdural abscess; premature delivery; suppurative tonsillitis; two attacks of erysipelas; jaundice, and metastatic abscesses.

In spite of these severe complications the patient recovered.

The author rightfully remarks that these patients do well even in the presence of secondary force if the primary source of infection is thoroughly dealt with and cut off.

LEDERMAN.

The Technic and Value of Catheter Inflation of the Tympanum

—B. ALEX. RANDALL, Philadelphia—*Phila. Polyclinic*, December, 1898.

Otologists must not abandon the catheter because it cannot undo damage long irremediable, but should use it with skill and confidence in the large group of cases when no operation, "patent eardrum" or phono-massage can avail as much, if at all.

Attention to the nose and pharynx must precede its use.

If the beak of a well-made catheter is passed along the nasal floor until it is felt to sink over the edge of the hard palate it will rarely fail to reach the mouth of the Eustachian tube, if rotated outwardly through a third of a circle. The back edge of the nasal septum is also a good landmark. Virgin silver is the best material for the instrument, as it can be easily bent and sterilized in the flame.

In chronic cases injections through the catheter may be attempted. Weak solutions of silver solutions, followed by iodine vapor are useful. Pneumatic massage by the Siegle instrument is serviceable. From four to six weeks treatment is necessary. Then an intermission is best, and another course of treatment for a few weeks will be more effective.

LEDERMAN.

A Case of Double Acute Mastoid Empyema, with Exposure of Dura Mater on One Side; Operation in Both—THOMAS BARR, M.D., Glasgow—*British Med. Jour.*, October 22, 1898.

The patient was a man, forty-six years of age, who had normal ears previous to this affection. The illness began in August, 1897, with severe pain, first in the right ear and then in the left. On each side the tympanic membrane was excised, which was followed in both ears by profuse discharge. The right mastoid was opened six weeks after the onset of the disease, and a large cavity was entered full of pus, with granulation tissue and cario-necrotic *débris*, while the sigmoid sinus and neighboring dura mater were found exposed on the back wall of the cavity. The left mastoid was opened three weeks later, when a similar condition was found, with the exception that there was no exposure of the sinus or dura mater. Four months elapsed before the complete cicatrization took place. There were neither rigors nor high temperature throughout the whole course of the disease. The purulent discharge from the ear in each case ceased almost immediately after operation, and the patient has made an excellent recovery. The hearing power, which was for many weeks defective, had almost entirely recovered when his case was reported.

WATSON WILLIAMS.

Case of Post-Influenzic Mastoid Suppuration running a Latent Course, and presenting the Symptoms of Trigeminal Neuralgia—T. K. HAMILTON—*Australasian Med. Gazette*, Vol. xvii, No. 10, Oct. 20, 1898.

The patient, a man aged fifty seven years, came with a history of having had influenza seven weeks previously, and of having suffered from continuous pain for the greater part of the time over the left side of the head. This extended from around the head below to the parietal eminence above, and was greater in front of the ear than over the mastoid. Later the pain was confined to the front of the ear, none over the mastoid, and extended upwards over an area which mapped out fairly the distribution of the temporo-auricular branch of the fifth nerve. Left membrana uniformly hyperemic; hearing reduced to loud voice at 6 m. There was no local tenderness upon deep pressure over the mastoid; no sagging of the supero-posterior wall of the canal; no constitutional disturbance. The diagnosis of influenzic otitis with temporo-auricular neuritis was made. Under treatment the membrane cleared up and hearing gradually improved, but no relief of the neuralgia was experienced, and it became more intense. On the thirteenth day there was for the first time tenderness on pressure over the mastoid, and a Wilde's incision was made which was followed by comparative freedom from pain for a few days, but returned with greater severity.

The patient now developed cerebral symptoms, giddiness and amnesic aphasia and delirium with high temperature. The mastoid cells were opened and found healthy. The usual trephine opening

was then made to explore the temporo-sphenoidal region, and finally the cerebellum was explored, but in each case with negative result. The *post-mortem* revealed a purulent leptomeningitis involving the whole base, the cerebellum and upper part of the cord. The tympanum was filled with semi-organized exudation. The antrum contained a small quantity of greenish-yellow pus; some pus was also found lying close to the lateral sinus. The error in diagnosis, held to be to some extent excusable, is admitted.

[The clinical features of tympano-mastoid disease in influenza, of which the above is a type, were clearly described nearly ten years ago by Politzer, who sounded a warning which the above case justifies—Ed.]

Eaton.

A Case of Otitic Brain Abscess (from Chronic Otorrhea); Optic Neuritis; Opening of the Mastoid and Skull; Recovery

F. S. MILBURY, Brooklyn, N. Y.—*Medical Age*, Nov. 1898.

The case was one of a married woman, thirty-three years of age, who had had a discharge from the left ear ever since infancy, following scarlet fever. The pus was offensive; there was necrosis of the middle ear and posterior wall of the external meatus, with bulging of the latter. The mastoid process was edematous and red, and the entire side of the head was painful. There was slight paralysis of the left side of the face, and of the right arm and leg, together with loss of memory, dullness of intellect and amnesic aphasia. The vomiting was excessive, and examination revealed optic neuritis. Temperature, 100; pulse, 115.

A mastoid operation, under ether anesthesia, disclosed a large abscess under the temporo-sphenoid lobe "between the dura and the arachnoid and intradural abscess." "The instrument passed in about $4\frac{1}{2}$ inches, and the sinus had a diameter of fully an inch." Recovery followed the operation, though very slowly, except as to hearing, which was nil.

[This case calls to mind one recently operated upon by the abstractor, in which there were similar alarming symptoms caused by an abscess behind and above the middle ear. There was an osteosclerosis of the mastoid process. Below the small mastoid antrum there was not a pneumatic space; the place of the cells was occupied by dense, hard, osseous tissue. Hence, the pus was not able to work its way to the external world, but had invaded the cranial cavity. The modified operation was followed by an immediate cessation of all the symptoms, and the patient is making an uneventful recovery.]

Bishop.

One Hundred more Mastoid Operations—B. ALEX. RANDALL. Philadelphia—*Penn. Med. Jour.*, August, 1898.

Inflammation of the naso-pharynx is the starting point of a great many instances of this affection. Consequently proper attention to this locality is emphatically necessary. When the middle ear chamber is attacked, rest in bed, with general antiphlogistic meas-

ures can do much good. Dry heat to the mastoid and hot douches to the canal are favored by this observer. Blood-letting in the early stages by leeching and by incision through the drum or canal wall is recommended. One should feel morally sure that there is need for the incision through the membrane before same is made, as this procedure is not always free from danger. Wilde's incision is not good surgery, for pus is not usually superficial when accompanying acute or chronic disease in this region. Conservatism and expectancy are in order so long as there is no pus, demonstrable outside of the middle chamber. When rational signs of pus are recognized, all temporizing must cease, and sound surgical principles must be followed. A clean sweep of all diseased tissue must be made, and all sinuses should be explored. Have a clean field before you in operating, for a long incision will heal almost as soon as a small one. Good drainage must be established. In chronic cases it rarely suffices to clean the mastoid alone. The middle chamber must be put in a healthy state.

LEDERMAN.

Inflammation of the Internal Ear with Absolute Deafness—C.

GURNEE FELLOWS—*The Clinique*, November, 1898.

A girl six years of age was taken with sore throat and slight fever. Previously she had tonsillitis with suppuration. There were nausea, vomiting and dizziness. Slight noises caused excruciating pain, and the eyes were turned upward. She was ill two weeks, but before that time had elapsed she was discovered to be absolutely deaf, except a faint temporary-perception of sharp noises in the left ear. In the six years that have elapsed since her illness she has been well and bright mentally. No signs of epilepsy or meningitis. Drum membranes and Eustachian tubes are normal. Has hypermetropia, with marked divergence, and diplopia, with suppression of the image of either eye indiscriminately.

Fellows is inclined to pronounce it a case of primary involvement of the semi-circular canals and disease of the auditory nerve, and accounts for the eye symptoms by the fact that the origin of the third nerve and the auditory nerve are near each other.

Cases of inflammation of the labyrinth and of the acoustic nerve are more obscure than those of any other of the special senses, and have been frequently mistaken for cerebro-spinal meningitis.

The history of the case is important inasmuch as it shows the disease to have traveled from without inward, whereas, had meningitis been the primary disease the direction in which the infection traveled would have been reversed. Furthermore, the deafness which follows meningitis is only partial as a rule.

As for treatment, the author believes that if the disease is recognized in its incipency much can be accomplished. He cites pilocarpine because of its power to produce effusion, and infers, from the homeopathic standpoint, that large doses of quinine would be efficacious.

JEFFERS. (BISHOP.)

Dumbness or Congenital Aphasia of a Family Type without Deafness or Obvious Mental Defect—H. N. MOYER, M.D.—*Chicago Medical Recorder*, November, 1898.

In the instances cited the aphasia was not persistent. Of the twenty-three persons nearly related, seven were defective, although in two of the seven the defect was a mere lalling. In the remaining five the development of speech was delayed until the children were over four years of age, one even reaching the age of nine before speech developed.

The term congenital aphasia, adopted from Wyllie, should not, Moyer thinks, be applied to mere delay in development of speech, but should be called, as Christopher urges, an anomaly of development.

Bastian thinks that speech has been practiced by so many generations of men that this power is now inherited by each succeeding generation almost as if the act of speech were an instinctive and automatic one.

When a slight abnormality interferes with the action of the speech centers it may, in some cases, be overcome by the stimulus of strong emotion, which may break down a barrier that the weaker stimulus has failed to penetrate, like the boy five years of age who had never spoken a word, but upon breaking a favorite toy exclaimed "What a pity!"

JEFFERS. (BISHOP.)

Treatment and Education of the Deaf—FRANK BAKER—*National Medical Review*, October, 1898.

In speaking of the anatomy and physiology of the ear Dr. Baker states that the sacs of the vestibule contain the terminations of those auditory nerve fibers whose function, possibly, is the appreciation of the distinctions of the quality of sounds.

The cochlea, which is absent in birds, is the organ containing the requisites for the appreciation of pitch. The correlation of sense impressions received from the ear is a complicated process as may be surmised from the complexity of the anatomical elements involved.

Robert Reyburn states that sixty per cent of all cases of deafness are congenital, and quotes authority for the statement that every tenth case of deafness is due to the marriage of cousins. By the census returns of Ireland for 1871, 201 persons were born deaf and dumb. Out of this number 187 were the results of the marriage of cousins.

Congenital deafness is due to an arrest of development of the fetal organs of audition resulting from the low vitality of the ovum from constitutional taint.

E. M. Gallaudet, whose father in 1816 founded the first school for deaf mutes in America, is of the opinion that a combination of the two great methods of deaf mute instruction, the oral and the manual, gives the best results. The employment of either method to the exclusion of the other is unwise, as both methods have re-

sources which the deaf mute needs. The oral method seeks to impart the power of speech and reading the lips, but many are unable to master it sufficiently to enable hearing persons to understand their articulation. The manual method or sign language has a greater wealth of expression and is invaluable as a means of instruction. In Germany the oral method is adhered to, but Mr. Heidsiek, an eminent instructor in the Breslau Institute, strongly advocates a broadening of the system. He says: "Deaf mute institutions are training and educational institutions, and their task consists in affording deaf mutes suitable culture, and in equipping them with intellectual and moral qualities."

In America out of fifty-five schools fifty are using the combined system and five the oral.

JEFFERS. (BISHOP.)

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Two Cases of Halfpennies impacted in the Esophagus for Five and Six Months respectively; Revealed by the X Rays and Removed—ROBSON W. MAYO—*Lancet*, July 16, 1898.

In the first case a boy aged four years swallowed a halfpenny, and at the time almost died of suffocation, which was prevented by his mother's presence of mind in pushing the coin beyond the entrance of the larynx by means of her finger. The coin was supposed to have passed into the stomach, as there was no actual obstruction to the passage of food. Some weeks afterwards he began to have pain in his neck, difficulty in swallowing, and he held his head stiffly as in caries of the cervical spine. Six months after the accident he was brought with a Röntgen photograph showing the coin impacted in the esophagus at a point opposite the pericardium. The patient was placed under ether, and the foreign body was easily withdrawn with the coin-catcher.

The second case was in a boy aged five years. A Röntgen photograph showed the coin in a similar position. It was successfully removed with the coin-catcher.

In cases of doubt the new photography should always be employed. The coin-catcher is simple in action and painless in application, and it should always be tried before entertaining the question of performing esophagotomy.

STCLAIR THOMSON.

Esophagotomy—GEO. S. BINGHAM—*Canada Lancet*, Vol. xxx, No. 5.

This was a case presented at the Toronto Clinical Society. The foreign body, a button had just begun to ulcerate through the esophagus.

GIBB WISHART.

Diagnosis and Treatment of Diphtheria—IRVING—*Virginia Med. Semi-Monthly*, September 23, 1898.

An interesting review of the bacteriology, prophylaxis and treatment of diphtheria, demonstrating the beneficial effects and lower mortality from the use of diphtheritic antitoxin.

SCHEPPEGRELL.

Some Clinical Notes—M. F. COOMES—*Louisville Med. Jour.*, September, 1898.

A married woman, age twenty-six, had suffered for several years from stricture of the esophagus due to swallowing concentrated lye. For five days the patient had been unable to swallow anything. After the lower bowel had been washed out with a normal saline solution, it was again filled with the solution and the absorption gave relief to the thirst.

The esophagus was then given complete rest and food and water administered by the rectum. In six days the spasmodic element had disappeared and the patient regained her usual degree of swallowing.

SCHEPPEGRELL.

Peachstone in the Esophagus Perforation Death—D. J. GIBB WISHART—*Canada Lancet*, Vol. XXXI, No. 2.

The peachstone was swallowed one week before the patient entered the hospital. There was constant pain in the left side of the neck—and practically total inability to swallow. The probang lodged seven inches from the incisor teeth, a coin catcher passed the obstruction and a piece of foul smelling granulation tissue was removed. Under chloroform, the stone was found outside the trachea, just below the cricoid, bathed in pus. It measured one and a quarter inches long by one and one-eighth inches broad.

The patient who was seventy six years of age, had several rigors in the next three days and died on the seventh. The sharp point of the stone appeared to have caused its lodgment at the point of perforation.

GIBB WISHART.

Intubation versus Tracheotomy in Laryngeal Diphtheria—R. McKINLEY—*Memphis Med. Monthly*, October, 1898.

Intubation is preferable to tracheotomy because there is entire avoidance of the surgical procedure so dreaded by the child and parents. The tube is easy of introduction after sufficient experience, and the child does not require the constant attention demanded in tracheotomy. The respiration is more natural, as the air is warmed and moistened by passing through the natural passages.

SCHEPPEGRELL.

Uterine Stenosis as a Cause of Exophthalmic Goitre—M. A. SPINK—*New York Med. Jour.*, September 24, 1898.

A report of two cases of exophthalmic goitre in which gradual dilatation of a stenosed *os uteri* by the negative pole of a galvanic battery caused the simultaneous subsistence of both diseases.

SCHEPPEGRELL.

Diphtheria—A. HAND—*Phila. Med. Jour.*, August 27, 1898.

The author has found that strong solutions of silver nitrate (60 grains to the ounce) when applied locally in cases of diphtheria, after the constitutional symptoms have disappeared, destroy the Kleb's-Löffler bacilli. This fact has been corroborated by Dr. J. M. Swan (*Phila. Polyclinic*, Nov. 12, 1898) in some cases, upon whom the applications were tried. If membrane is present, the silver solution must not be employed, until the membrane has entirely disappeared.

[In all cases of acute inflammation of the pharynx or fauces, strong solutions of argentum act very happily in allaying painful symptoms and not infrequently prevent the continuance of the disease.—M. D. L.]

LEDERMAN.

The Pathology of Diphtherial Paralysis—FREDERICK E. BATTEN—

British Med. Jour., November 19, 1898.

Comparatively few examinations have been made on cases of diphtherial paralysis by Marchi's method and it was with this object in view that the writer started his investigations of the nervous systems of such cases of diphtherial paralysis as he could obtain.

The brain, cranial nerves, vagi, phrenics, spinal cord, spinal roots anterior and posterior, ganglia of posterior roots and peripheral nerves were hardened in Müller's fluid for varying periods, not less than thirty days. Pieces being previously removed from cervical, dorsal and lumbar region of cord and hardened in formalin for examination by Nissl's method.

By Nissl's method no change could be demonstrated in the cells either of the anterior horn or of the posterior root ganglia.

By Marchi's method the anterior root fibres as they pass through the white matter have degeneration shown by number of black granules in their course. As they enter the gray matter these fibres are no longer in bundles, but scattered and pass in all directions between the cells of the anterior horn. This is not so easy to trace in the posterior region of the cord, owing to the interstitial fat normally found in the region. The number of degenerated fibres is, however, greater in the posterior external column than in the posterior internal.

The vessels in the gray matter are engorged. In the anterior roots the myeline sheath of the nerve is broken up into granular masses composed of very fine globules of fat. Some of these are fused together.

In the posterior roots exactly the same change is found only less marked. In the posterior root ganglia no change is found in the cells, but the fibres on both sides of the ganglion exhibit characteristic degeneration of the nerve fibres.

In the main trunks of peripheral nerves and in the fine branches the nerve fibre is swollen up and the myeline sheaths appear filled with fat globules. In certain spots these have fused together; in the latter stages the myeline seems broken up into oval masses containing globules of various sizes.

The writer gives a table of cases and shows result of examination in each case; the evidence obtained points to a parenchymatous degeneration of the nerves. These cases are contrasted with Mouravjeff's experiments which show that changes occur in the cells of the anterior horns in the early stages of infection and which afterward recover. A digest is given of other observer's work on the subject and writer draws conclusion that it is probable that the dominant lesion in diphtherial paralysis is a parenchymatous degeneration of the myeline sheath of the nerves and that this degeneration affects both motor and sensory fibres alike.

F. W. FONGROU.

VII. INSTRUMENTS AND THERAPY.

Treatment of Rhinitis—G. I. CULLEN, Cincinnati, O.: *New England Med. Monthly*, December, 1898.

Among the various preparations tried by the author glycothymoline has given him the most satisfaction. He uses it in the strength of twenty per cent in a coarse spray every three to six hours, or as a douche in the strength of one part to six of water, to be increased to three parts in the course of a week or two.

LIEDERMAN.

The Treatment of Coryza—GALOIS: *Therapeutic Gazette*, October 15, 1898.

A number of formulæ are given for the different stages of the disease. The following powder is employed on the first day as a snuff, to be used every two or three hours:

℞ Cocaine hydrochlor.....	gr. iii
Menthol.....	gr. ii
Salol.....	5 iii
Acid boracic.....	5 iii
Mf.—Snuff.	

[In such cases it is not judicious to employ cocaine for home medication, as patients readily develop the habit. M. D. L.]

LIEDERMAN.

Mercury in the Treatment of Atrophic Rhinitis—W. P. PORCHER—*N. Y. Med. Journ.*, August 6, 1898.

A patient suffering from atrophic rhinitis was given mercury, which he used until he was severely salivated. A month later there had been no return of the scab-formation in the nose.

[That there was some suspicion of a syphilitic element is demonstrated by the fact that the physician ordered this specific remedy. The denial of the patient of a primary lesion is not usually given much credence by the medical profession.] SCHEPPEGRELL.

Tonsillitis: A Lesson in Nuclein Therapy—JOHN AULDE—*The Med. Summary*, Nov., 1898.

This disease is considered to be due to digestive disturbances, frequently superinduced by cold or exposure. Suboxidation and the autotoxemia being responsible for the elevated temperature and other symptoms. Owing to the extreme vascularity of the throat tissues, irritation at this site, gives rise to the painful symptoms. Leucocytes elaborate and produce a substance called nuclein, and thus play an important part in the economy by offering this resistance to the invasion of foreign microbes. This artificially prepared nuclein is best obtained from the thyroid and thymus glands. Clinical reports show that nuclein medication is a specific in the arrest and control of infectious disease.

LEDERMAN.

The use of the Bernays Aseptic Sponge in the Nose and Nasopharynx, with Special Reference to its use as a Pressure Hemostatic—W. K. SIMPSON—*New York Med. Jour.*, October 1, 1898.

The Bernays sponge is an artificial product composed of properly prepared cotton fiber, subjected to many hundred pounds of pressure, cut in circular forms with a die, and presented for use in the shape of compressed circular discs about one-sixteenth of an inch in thickness and of two sizes; the small an inch and a quarter, and the large an inch and a half in diameter.

It has marked advantages in packing the anterior and posterior nares, on account of its simplicity of application and the pressure caused by the rapid absorption and enlargement of the sponge. It is also useful for intranasal dressing, and may be substituted for the splint in the later stage of the Asch operation for deflected septa.

SCHEPPEGRELL.

Some Practical Points in the Treatment of Diphtheria—S. BIRD-SALL—*The Med. Council*, Vol. iii, No. 12, December, 1898.

In this article the writer points out that the profession is far from being agreed as to the merits of antitoxin, and believes that the local conditions need careful attention. He has frequently observed the persistence of points of diphtheritic membrane and finds that this is caused by the existence beneath each point of a cavity, shallow or deep, in which lodge the germs which are not eradicated by washing and spraying. These he treats by hydrogen peroxide or a solution of Tinct. Ferri Chlor. in glycerine, applied to the bottom of each cavity with cotton on an applicator. From observations he concludes that tobacco possesses germicidal properties not recognized, and apparently cured one patient with diphtheria by having him expel tobacco smoke through the nose.

EATON.

The Active Principle of the Thyroid Gland—A. C. STOKES, *West. Med. Rev.*, Vol. iii, No. 12, December 15, 1898.

This is a clear and concise report of what is at present known upon this question. The conclusions arrived at are: that the active principle is the idiothyryn obtained from the colloid discovered in the gland by Hutchison; that the method of extraction is very important; the glycerin extract so often used cannot be so highly recommended, owing to the greater insolubility of the thyroïdin in glycerin, the better plan being use of alcohol, dilute alkalies, or sodium chloride in the extraction. The active principle contains a variable per cent of iodine; the iodine is combined with a globulin or albumin and has some important bearing upon the etiology of goitre and myxedema.

EATON.

Treatment of Tuberculosis of the Throat J. S. MOH, *Kansas City Med. Record*, Vol. xv, No. 11, November, 1898.

A case is here reported which was treated by the electro-cautery, followed by anodal diffusion of copper (oxychloride of copper). The latter was carried out daily for three weeks. There was marked improvement.

EATON.

Some Results of a Year's Experience with Superheated Air—

A. G. REED, *New York Med. Jour.*, September 17, 1898.

In addition to the benefits of superheated air in the treatment of rheumatism and gout, the author believes that it may be scientifically applied in tonsillitis and bronchial and asthmatic affections. A body machine is used and a temperature of 250 to 260 degrees F. maintained. This treatment proved successful in the case of a singer, who, in addition to a rheumatic affection of the foot and ankle, suffered from "inflexibility" of the vocal cords. Nineteen applications also afforded great relief to a patient suffering from distressing paroxysms of asthma.

SCHIEFFELGRIEL.

Note on a Simple Method of Curing Aphonia—A. ABRAMS—

Therapeutic Gazette, November 15, 1898.

For the relief of aphonia and dysphonia of laryngitis the following method is suggested as giving pleasant results: Over the points on each side of the neck in the thyro-hyoid membrane, where the internal laryngeal branch of the superior laryngeal, the nerve of sensation to the larynx passes into that organ, the parts should be frozen with chloride of methyl or a spray of rhigolene. The freezing must be thorough. The relief is almost instantaneous, and phonation can be carried on with freedom. In some instances, the relief is of short duration, and freezing must again be performed.

The author believes that this treatment acts as a shock inhibiting the nerve functions for a variable period, thus putting it in a condition of rest.

LEDERMAN.

The Treatment of Exophthalmic Goitre with Suprarenal Substance, with Exhibition of Cases—S. SOLIS-COHEN—*Phil. Polyclinic*, September 17, 1898.

In four cases in which the result of the treatment could be followed, the improved condition seems to justify the claim of the curative results from this method. At first five grains daily are administered, and this amount is gradually increased until thirty grains are taken daily, this being then diminished to ten grains.

SCHEPPEGRELL.

The use of Nosophen and Antinosin in Purulent Disease of the Middle Ear—F. H. MILLENER, Buffalo—*Buffalo Med. Jour.*, December, 1898.

These new iodine compounds have been tested in thirty-six cases by the author, and have showed very satisfactory results. They were employed in suppurative cases which had resisted the usual treatment and under their application the disease was checked. Antinosin was employed in from 2 to 3 per cent solutions, and after the solution was instilled into the ear nosophen in powder form was dusted into the canal. Some momentary dizziness may follow the application of the antinosin, but this symptom rapidly disappears and no evil effects are observed.

The abstractor has found these drugs very serviceable in nasal and aural disease. He applies the nosophen in powder form after nasal and mastoid operations and is much pleased with its antiseptic and desiccating properties. Antinosin has also been employed in powder form, blown against the chronic suppurating membrane in chronic otitis, and no unpleasantness was noticed. A word of caution to the patient or parent, when the blue discoloration appears, on account of the color of antinosin, so as to avoid unnecessary alarm.

LEDERMAN.

Antistreptococcic Serum in Furunculosis—A. MARTIGNY—*Canadian Practitioner*, Vol. xxiv, No. 9.

Report of two cases successfully treated. Dose, 20cc.

GIBB WISHART.

A Preliminary Report of Experiments with Heated Blood in the Treatment of Croupous Pneumonia and Tuberculosis Pulmonalis—ELESTROM AND GRAFSTROM—*New York Med. Jour.*, August 27, 1898.

In incipient cases the injections of heated blood seem to have had a beneficial influence. This treatment undoubtedly opens a wide field for interesting experiments, but it needs to be more fully investigated before a decided opinion can be expressed regarding its permanent effect in pulmonary tuberculosis. SCHEPPEGRELL.

Immunity the Fundamental Principle Underlying all Treatment of Tuberculosis—FLICK—*Memphis Med. Monthly*, October, 1898.

Tuberculosis is essentially a local disease, and as such is slow in exhausting the soil in the host in which it is colonizing. As a disease in its complete symptom-complex, it is a series of colonizations; each colonization, in the complete cycle of its existence, constituting a minor attack of the disease. Each colonization which runs its course leaves the system of the host less competent to battle against a subsequent attack. Every successive colonization is more extensive and more devastating than the preceding one.

When a colony has been established, cure can only take place either through the phagocytic powers of the blood by destruction of the bacilli before the circulation is cut off by the deposit, or through the defensive powers of the system by necrosis and ejection of the mature bacilli or by encapsulation. During the process of necrosis and ejection of the mature bacilli, reinoculation may take place.

There are really few cases of tuberculosis in which recovery does not take place from the first attack, and in many cases complete restoration of the health follows a second, third or even fourth attack. Unfortunately, however, after each attack there is a lower physical tone, a lower natural immunity, recovery is slower and less complete, and the chances of ultimate recovery greatly diminished.

The scientific treatment of tuberculosis on this principle must be based on immunity either natural or artificial. Favorable climatic conditions are useful, but a more important consideration is general hygiene and diet, which are necessary to the promotion and maintenance of the normal standard of health. SCHLIEFFEGRELL.

Antituberculous Oil—Ex.—*Chronica Medica*, September 15, 1898.

Rx Vegetable creasote.....	150 minims
Naphthol.....	45 minims
Metallic iodine.....	2½ grains
Codliver oil.....	6 ounces

A tablespoonful three times a day.

The Treatment of Pulmonary Tuberculosis by Sero-Therapy—

MARAGLIANO—*Press Medicale*, August 6, 1898. *N. Y. Med. Journ.*, September 10, 1898.

The employment of serum for the tuberculous patient is justified from a scientific point of view: (a) By the action of serum against tuberculous poisons, and, perhaps, by an action, yet to be determined, upon the bacilli; (b) by the analogy of the therapeutic process of the serum with the defensive processes of the organism in spontaneous cure. This analogy is demonstrated as follows:

1. By the presence of antitoxines in the blood of the healthy man.

2. By the production of antitoxines in man when injected with tuberculous poisons.

3. By the presence of antitoxines in the organism of patients in whom spontaneous cure of tuberculosis has occurred. From a clinical point of view, the action of serum is demonstrated in man (*a*) by the fall of temperature (*b*), by the disappearance of the bacilli from the sputum, and (*c*) by the cure of the broncho-pneumonic foci.

4. The therapeutic action of the serum is complex, and is exercised on the poisons and on the bacilli of tuberculosis.

5. Because the disappearance not only of the toxemia, but also of the bacilli is noted, with an arrest and even cure of the morbid process.

The examination of 1,362 clinical observations justifies the application of the serum to the therapeutics of human tuberculosis.

SCHEPPEGRELL.

Hyporespiration and Hyperrespiration in Tuberculosis—PLAY-

TER—*New York Med. Jour.*, September 3, 1898.

In the early stage of tuberculosis, constant deep breathing of cool outdoor air is recommended. In the latter stage, oxygen must be supplied in some modified manner, ozonized oxygen appearing to give the best results.

SCHEPPEGRELL.

Sanitarium Treatment of Pulmonary Tuberculosis—J. E. STUB-

BERT—*N. Y. Med. Journ.*, July 30, 1898.

A comparison of the cases treated in the sanitarium and outside shows that the average gain in weight is greater and the improvement in the physical signs, cough and expectoration relatively more rapid among the sanitarium inmates. In far advanced cases the patients should remain at home.

SCHEPPEGRELL.

Iodoform in the Treatment of Phthisis—LENZMANN—*New York*

Med. Jour., August 20, 1898.

While not claiming much for this, the author is of the opinion that in a certain number of cases better results can be obtained from this agent than from the ordinary systematic line of treatment.

SCHEPPEGRELL.

The Treatment of Coughs with Heroin—M. MANGES—*New York*

Med. Jour., November 26, 1898.

This drug was found useful and reliable in allaying coughs and pain in both acute and subacute catarrhal inflammation of the respiratory tract. A most convenient form of administration is in tablet triturations of a twelfth and a sixth of a grain.

SCHEPPEGRELL.

BOOK REVIEW.

The Medical News Pocket Formulary for 1899. containing sixteen hundred prescriptions representing the latest and most approved methods of administering remedial agents. By E. Quin Thornton, M.D., Demonstrator of Therapeutics, Pharmacy and Materia Medica in the Jefferson Medical College, Philadelphia. In one wallet-shaped volume, strongly bound in leather, with pocket and pencil. Price, \$1.50 net. Lea Brothers & Co., publishers, Philadelphia and New York.

A perusal of this handy volume brings to light a selected series of up-to-date prescriptions. Several practical features are noted. Both the apothecary and the metric system are represented in the dosage of each prescription. The indications specifying the use of each prescription have received more than usual attention. The alphabetic classification of diseases favors ready reference.

The Eighth Annual Report of the Eye, Ear, Nose and Throat Hospital, New Orleans. January 1, 1897 to December 31, 1897.

The report of the year's work of this excellent Southern institution shows very gratifying results.

Buxton: Its Baths and Climate. By Samuel Hyde, M.D., London, England. Fourth revised edition, 103 pages, crown 8vo. Price, two shillings.

This volume comprises a full account of the celebrated waters and climate of Buxton, together with special chapters on baths, bathing and massage. The prominence of the author in the field of climatology and balneology is of itself an excellent recommendation for the volume in the various considerations of this health resort. The author has included many valuable practical sentiments in the maintenance of health and hygiene. John Heywood, publisher, Manchester, England.

The Phonendoscope and its Practical Application. By Prof. Aurelio Bianchi. American edition, 37 illustrations, 77 pages. Geo. P. Pilling & Son, publishers, 1225 Callowhill street, Philadelphia, 1898. Price, 50 cents.

This interesting work on phonendoscopy is a translation of a series of lectures delivered by Prof. Bianchi, of Parma, Italy, the originator of this delicate aid to auscultation examination. This volume should be in the hands of every progressive physician who desires a detailed knowledge of the workings of this little apparatus.

Sajous' Annual and Analytical Cyclopedic of Practical Medicine. Volume ii. The F. A. Davis Co., Philadelphia, 1898.

The second volume of this admirable annual offers many points of interest to the oto-laryngologic reader. Among the special articles, one on diphtheria, is an excellent review of our present knowledge of this affection from every standpoint. A very exhaustive chapter on deaf mutism has been contributed by one of the best authorities upon the pathogenesis of this condition, Dr. H. Mygind, of Copenhagen.

A consideration of the various forms of bronchitis, with the pathology and therapy to date, cerebral abscesses with a selected series of abstracts from the literature of 96-97-98, creasote, its preparations and doses, croup and a consideration of its varieties and therapy, are all excellent chapters bringing these important subjects up to date.

The work of this annual is exhaustive, but would be made considerably more valuable if the volume appeared in quicker succession.

International Clinics. Volume iii, eighth series, 1898. J. B. Lippincott Co., Philadelphia, publishers.

The third volume of this interesting series contains a practical comprehensive account of "Chronic Non-Suppurative Inflammation of the Middle Ear; the two forms and their Treatment," by Dr. S. S. Bishop.

The differential diagnosis is given special prominence, and the lecture includes a résumé of the therapy employed in the treatment of both the hypertrophic and sclerotic form of this affection.

"The Treatment of Acute Bronchitis" by Dr. J. A. Robinson will also be of interest to oto-laryngologic readers.

A Pocket Medical Dictionary, giving the pronunciation and definitions of 21,000 words used in medicine and collateral sciences. By Dr. Geo. M. Gould. 538 pages, full leather. C. Blakiston's Son & Co., Philadelphia, Pa. Price, \$1.00.

The two best recommendations of this excellently compiled and arranged volume are the reputation of the author and the satisfactory, practical tests by daily use of this handy book.

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VOL. VI.

ST. LOUIS, MO., MARCH, 1899.

No. 3.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

THE REBUILDING OF A NOSE WITHOUT THE USE OF AN ARTIFICIAL BRIDGE.*

BY DR. T. PASSMORE BERENS, NEW YORK CITY.

It has been my good fortune to treat a number of severe injuries to the nose, resulting in considerable deformity. These cases were nearly all of very recent injury. In some of the cases the nasal bones were not only displaced but one or both were at times crushed and driven inwards. In the treatment of these cases I have for a long time been impressed with the ease with which they were reset and with the very slight shock resulting to the general system. As a rule, too, but slight pain was present, and this was not persistent. This lack of pain is probably due to the lack of muscular contraction, which fact also accounts for the ease with which these parts are held in good position after having been treated. With these points in mind I do not hesitate to attack the bony framework of the nose whenever it is involved in nasal deformity.

The case I present to you is one of long standing deformity. I have selected it because of the long standing and very great deformity it presented before the operation and because it illustrates the results that may be achieved by surgery.

* Read before Eastern Section American Laryngological, Rhinological and Otological Society, in Washington, January 28th, 1899.

The case is one giving a history of severe injury to the nose in early childhood resulting in the very ugly deformity you see in the photographs marked A.

The nasal bones were pushed apart, turned outward as it were, and then flattened, this with considerable loss of substance in these bones made the bridge of the nose almost flat and very broad. This flattening increased toward the tip of the nose and made the alae very broad and prominent. The line of the septum was apparent along the ridge of the nose as an irregular obtuse angle with the apex pointing to the right.

The nasal speculum revealed the columna well over to the right side largely occluding the right naris, while the body of the septum



Fig. A.



Fig. A.

was deflected to the left; and its upper half was adherent to the wall of the vestibule.

Under ether anesthesia the adhesion of the soft parts was divided from the septum. Then with a slightly modified Adams septum forceps I grasped the left nasal bone, the outer blade of the forceps having first been covered with rubber tubing to prevent injuring the skin, and forcibly broke it from its attachment to the nasal process of the superior maxilla and from the frontal spine. This procedure was repeated on the opposite nasal bone. Considerable force was required, and in order to make the break complete the bones were "twisted." The right nasal bone did not break satisfactorily so that a rectangular bar of steel, guarded by rubber tubing, was laid against the facial side of the bone and several heavy blows were struck with a bull's hide mallet before it finally became sufficiently

pliable. This break purposely included some of the nasal process of the superior maxilla. It was repeated on the left side. The perpendicular plate of the ethmoid was found to be involved in the septal distortion and was broken by the same forceps, as also was the rest of the septum where it was deflected. Much care was taken to break not only the cartilaginous septum but the bony nasal spine of the superior maxilla was also broken. In this manner the nose was made quite pliable and it was easily moulded. One of my perforated cork splints, unusually broad and thin, was inserted in each nostril and a plaster cast of a normal nose was then bandaged firmly in place as an external splint. There was very slight reaction following the operation and the temperature at no time reached over $99\frac{1}{2}$.



Fig. B.



Fig. B.

The patient did not complain of pain after the operation. The plaster cast was obtained from the nose of a willing friend, then divided into two equal parts and arranged so that an ordinary roller bandage retained it nicely. This was removed after three days and this clip was substituted. It is a Fox glass clip with the nasal ends somewhat longer and broader than usual. This was mounted later with plain glasses and worn for three weeks with the result as you see it in the photographs marked B. This operation was performed June, 1898, and the result remains as you see it in the photographs.
101 Park Avenue.

THE INFLUENCE OF NASAL OCCLUSION OVER CEREBRATION.*

BY DR. D. A. KUYK, RICHMOND, VA.

Lecturer on Laryngology, Medical College of Virginia, etc.

No effort will be made in this paper to explain the manner in which a nasal occlusion produces a disturbance of cerebration. To do so would involve much theoretical reasoning with but little, if any, positive proof to sustain it, and would, I fear, tax your patience.

That it can and does alter brain function, I hope to convince at least some of my hearers. To the host of troubles already known to follow upon nasal disease I wish to add this one, so that we may be able, in a few cases at least, to give an affirmative answer to the question. "Canst thou not minister to a mind diseased?"

Then, too, perhaps, some investigating genius may arise who can prove that Byron and many others of his kind were subject to attacks of mental aberration due to nasal occlusion, as did Hans Wilhelm Meyer, who wrote a book showing that the facial expression of some of the Greek busts and statues indicated that the originals suffered from adenoid vegetations.

The injurious effect upon children of obstructed respiration, whether due to intra-nasal hypertrophies, enlarged tonsils or adenoid growths, occurring singly or combined; how their physical and mental development is retarded: the evidences, in some, of the perversion of some one, perhaps several, of the senses; the many and varied disturbances of the nervous system that may, and frequently do occur, is too well known to medical men to demand further mention.

That chronic nasal occlusion, in the adult, produces mental as well as physical disturbances of more or less severity, determined largely by the temperament of the patient, is not so generally appreciated, and it is to this symptom of that affection that I ask your attention for a few minutes.

Many medical men (even some of the more recent graduates, I fear) look upon the nose more as a cosmetic appendage, put there by a merciful Creator merely to give character and expression to the face rather than as an organ of great physiologic importance, performing functions peculiarly its own impossible to be performed by

* Read at the meeting of the Tri-State Medical Society of the Carolinas and Virginia, held in Charlotte, N. C., January 18-21, 1899.

any other organ or tissue in the body: Hence any interference with, or interruption of its functions must impair the health, strength and resistance of the body.

Many of the older members of the profession who were taught that the nose is the organ through which we *should* breathe and that it possesses the sense of smell, pay but slight, if any, regard to the most important function the hairs in the vestibule and the ever moist membranes perform in arresting many foreign particles and, perhaps, noxious gases in the air; to its function of tempering and moistening and probably determining the density of the inspired air; to its function, together with the uvula palatal structures and the vault of the pharynx, of a sounding-board and resonating cavity, thus determining the timbre of the voice.

Then, too, to many nasal catarrh, so called, is still the bugbear it was twenty-five years back: to be treated with a shrug of the shoulders and any indifferent wash, given more as a placebo than as a curative, and then turned over to a kind Providence for further care.

So serious a condition as a disturbance of brain function (call it mental aberration, inco-ordination of ideation, or what else you will) is referred to disease of any other organ than that of the nose, an organ to them altogether too insignificant and unimportant to be capable of causing such profound effects.

Think of the numerous important structures directly and indirectly connected with the nostrils, almost, indeed, too numerous to mention in detail in this paper.

First of all the antrum of Highmore discharges its secretions into the nostrils: next come the lachrymal secretions; then come the frontal sinuses; further back again the sphenoid sinus and the ethmoid cells must find an exit into the nostrils for their secretions. While we do not at present know the quantity of fluid that each cavity secretes nor exactly the importance of each cavity to its surrounding structures, yet we do know the incessant worry and trouble disease of any one of them produces. Many of these cavities are in very close relation to the brain, and we know not what peculiar relation they bear to the proper performance of the delicate and mysterious functions of that most important organ.

Then too we must not forget the numerous and sensitive nerves and the blood supply of these cavities which, in the aggregate, must present a considerable quantity of tissue to become affected by disease.

It is a matter of no surprise, then, that an alteration of function, the retention of secretions, the pressure upon the numerous nerves, the disturbance of circulation in these cavities which necessarily

follows a chronic occlusion of the nostrils gives rise to functional mental disturbances, and, like diseases of the mastoid antrum, attacking the thin bony plates that separate them from the brain may perforate them and give rise to organic disease as well.

It is because of this lack of definite knowledge that makes it advisable for us to proceed with the greatest care and caution.

The mariner may force his craft at full speed in the open sea under a clear sky, but proceeds with great care and caution during a fog in the tortuous and unknown channel.

It is much to be feared that but few of us appreciate or comprehend the vast influence, direct or indirect, immediate or remote, of a chronic nasal stenosis. It is only when one so affected applies for treatment that we are aroused to a full sense of realization of the suffering and torture, mental and physical, this condition entails.

Let me but ask those who have had an acute coryza, have they not experienced the torturing, sometimes agonizing headache, intracranial pressure as if it would split the skull, the sense of discomfort from the tightly occluded nostrils, the sense of oppression and suffocation felt in the chest, the general muscular, nervous and mental depression, often lasting for days afterwards, and yet this same condition is found, only greatly intensified, in those suffering from chronic nasal occlusion. Consider, then, one who is more or less constantly harassed with these torturing headaches, becoming more severe and of longer duration as the disease progresses. The constant dryness of mouth and throat caused by mouth breathing. The asthmatic symptoms occurring chiefly at night, caused by the tongue (relaxed in sleep) falling back into the throat and effectually closing the larynx, a symptom likely to occur to all mouth-breathers, young or old. As the occlusion progresses these attacks become more frequent, and many complain of the fatigue and shortness of breath caused by active exercise. Now the system begins to weaken because of the lack of oxygenation of the blood and by reason of the mental distress.

It is at this time that fugitive pains, more or less frequent and severe, here and there and everywhere, are felt: they add to the already existing discomfort, and the day as well as the night is spent in torture and misery. The constancy of their sufferings causes them to brood over their symptoms until they become morbid, and it is at this stage that the mental faculties become involved.

At first there is only a temporary confusion of ideas. As time goes on the mind becomes more and more affected until a most profound degree of mental apathy is reached. All interest in business, social and family affairs is lost. There is sometimes such great con-

fusion of thought that intelligent speech is difficult. And eventually, after they have drugged themselves, after being doctored by their friends and by various druggists, after passing through the treatment of several quacks, after their patience, and also their funds, are almost exhausted, they finally present themselves to some one who is capable of relieving them. They are then anemic, weak, nervous and probably hysterical, and demand immediate relief.

They must be treated with the greatest tact and diplomacy as well as with tonics and by surgical procedures, namely, removal of the offending growths or hypertrophies.

They must receive a dose of positive mental suggestion at each treatment to overcome the predominating mental impressions of their own manufacture. Fortunately the severer cases are not of very frequent occurrence, but the milder cases are seen quite frequently and demand our best efforts, thought and treatment, for if they do not get relief they become discouraged, stop treatment and drift on from bad to worse.

The citation of a few cases will, I hope, help to illustrate the condition in question:

The first case was one of peculiar interest but was seen only twice, the patient in a spell of profound despondency committing suicide.

A man of forty-nine years of age, of good physique but presenting that peculiar facial expression indicative of mental disturbance: Eyes widely distended, mouth open, nose flat but wide, a profuse purulent discharge flowing from it while entering my consulting room.

The first words spoken by the patient after seating himself were: "I'm afraid my brains are sloughing away. There is such a constant and copious discharge from my nose and especially into my throat that for three nights and days past I have been unable to lie down, fearing the discharge would choke me. My nose is so stopped up I can't breathe through it, has been so for two years and is getting worse. I suffer from a shortness of breath on the least exertion. I have not been free from pain in the head for many months; it feels as if there is an iron band around it which is being tightened. I'm in greater agony than I can express in words, and I feel that I'm going crazy."

Examination revealed both nostrils occluded by dense hypertrophy of both middle and inferior turbinates. Between the swellings a thick purulent discharge forced itself into the vestibule. The pharynx was filled with a muco-purulent secretion thick and tenacious.

The cavities, nasal and pharyngeal, were cleansed but as quickly filled with the discharges. There was pain on pressure over the antra and frontal sinuses. There was evident disease of both cavities and sinuses. Cocaine was used to reduce the nasal swellings, and this afforded some relief. The cleansing, etc., was repeated on the following day, but the patient was much depressed, and the following night committed suicide. He positively denied syphilitic infection, and there was no evidences of it unless it was the nasal disease.

There are many facts to prove that he was not mentally affected from cerebral disease. He had by thrift and economy accumulated considerable wealth for one in his station of life. Of his own accord he told me that his "mind became affected sometime after his nostrils became diseased, and that if he could get his head cured his mind would be all right."

Case II.—Railroad engineer, age forty-seven. For fifteen months suffering with constant headaches (occasionally becoming very severe). Complains of constant stoppage of nostrils and profuse discharges from them, especially backwards into throat, this has become so troublesome that sleep in the recumbent posture is impossible. Frequently having to swallow the discharges he becomes nauseated and occasionally vomits. Recently has lost appetite. Has become much reduced in flesh and strength, and is very nervous and irritable. He is very hoarse and gets quickly out of breath. For six weeks has done no work because of failing memory and mental confusion, fearing an accident might result from his inability to remember train orders, etc. Though of large frame, he was so pale and weak he looked as if he had been seriously ill. Facial expression indicated mental disturbance. Nervous system much depressed, as evidenced by tremulousness of hands, head and tongue. History of syphilis twenty-five years ago. Both nostrils so occluded with hypertrophies of middle and inferior turbinates that no air could be forced through them. Pharynx covered with tenacious mucus, the mucous membrane dry and pale and tender. Lingual tonsil considerably enlarged. On right vocal band anteriorly is located a papilloma of moderate size. I treated him for a time with anti-specifics, but with no result. Then the nasal hypertrophies were removed, and quickly improvement began. In about three weeks he returned to work free from pain, mental aberration, or other discomfort. A tonic anti-syphilitic treatment was continued for some time, though I could not obtain his consent to remove the papilloma. The patient continues well.

The third case is one of a type milder than either of the others, and rather frequently seen. Patient thirty-eight years of age, of Irish parentage; occupation merchant. Good physique, no deformities. Family and personal history favorable.

Complains that for three years his nostrils have been troubling him. At first only occasionally stopping up, until now for a year past he has been unable to breathe through them. Frequently at night he awakens out of breath and dreads to return to sleep, fearing another attack. Frequent headaches, always a sense of weight and oppression in the head.

The constancy of the annoyance has made him very nervous and irritable, and he was considering closing out his business and seeking benefit in another climate. He has been under treatment of several quacks, but instead of deriving relief got worse. The left nostril contained a very large polypus. The right nostril was closed with a dense fibrous hypertrophy of the inferior and considerable enlargement of the middle turbinate. Removal of the offending masses afforded marked relief.

His nervousness was treated with valerianates of quinine, iron and zinc, and in three weeks he was comparatively a well man.

I have selected these cases from among several on my case book as representative of different degrees of mental aberration caused by nasal occlusion.

In every case as much care as possible was taken to establish a correct diagnosis lest the aberration might result from some disease, functional or organic, of the central nervous system; of the heart, as a result of ocular disturbance; or perhaps of a purely hysteric nature or as the result of a toxemia or from alcohol, tobacco or a drug habit.

The treatment scarcely needs further elaboration. It consists in the treatment of the hypertrophic rhinitis; correction of deviations of the septum, the removal of septal spurs, the systemic treatment appropriate to the case, and though before mentioned, I must again call attention to the value of mental suggestion, not only in these special cases but in many others that apply for treatment.

It may be that I attach too much importance to the effect upon the mind of nasal occlusion, but the cases of this character that I have seen and that were cured by proper treatment force upon me the conclusion that the nasal occlusion is the causative factor in the production of the mental disturbance, and that the latter condition is not, as may be claimed by some, merely a coincidence.

4 W. Grace Street.

OPERATIVE PROCEDURES IN STAPHYLORRAPHY.*

BY JOHN C. LESTER, A.M., M.D., BROOKLYN, N. Y.

Associate Member American Otological Society; Fellow of the American Laryngological, Rhinological and Otological Society; Fellow of the American Academy of Medicine; Assistant Surgeon of the New York Eye and Ear Infirmary; Assistant Surgeon to the St. Bartholomew's Clinic of the Eye, Ear, Throat and Nose; Member of the Medical Society of the County of Kings, Etc.

It is not the aim of the writer in what shall follow to review at length the literature of staphylorrhaphy, or to present an entirely new method of dealing with cleft in the soft palate. A brief reference, however, to the etiology of this defect and the more common operative procedures, as described by recent writers, cannot fail to be of interest. Moreover, the history of the case to be presented is unique, and the operation to be described, as well as the subsequent remedial measures adopted, have varied considerably from the usual methods employed in dealing with this condition.

There is no known law governing the occurrence of cleft palate, any more than there is a law controlling the various congenital defects found in the median line, such as hair-lip, colobomata, epispadias, etc. All of these conditions, except those due to accidental lesions (traumatic or luetic), arise from some defect in the early stages of fetal development.

Fissure of the soft palate, with which alone we are concerned at this time, is often accompanied with other lesions, more or less complete, of the adjacent structures. For example, there may be a complete loss of substance in the soft palate and a hair-lip combined, or there may be a complete separation of the palatine structures throughout, including both the hard and soft palates and the upper lip. In short, defects in this region follow no law and are found in every conceivable form and variety.

These malformations are usually hereditary.† Cases, however, occur where there is no trace of heredity. In such cases there is usually found to have been some maternal influence: the mother has been much out of health during the early weeks of pregnancy; one pregnancy has followed another in close succession or conception has occurred during lactation. Professor Houghton, of Dublin,

* A paper read at the Annual Meeting of the American Laryngological, Rhinological and Otological Society, held at Pittsburg, Pa., May 11, 1898.

† Ashhurst, Vol. V, pp. 515.

long ago observed in the case of animals, the effect of certain forms of diet on the production of cleft palate, and more recently another writer has claimed that certain forms of diet have a direct relation to the determination of sex. Whatever may be thought of these statements, it is a matter of common observation among obstetricians that a carefully regulated diet during the earlier parturient period has much to do with the prevention of congenital defects of this nature.

The age at which staphylorrhaphy should be performed is still *sub judice*. In fact, it is still a matter of doubt with some eminent surgeons as to whether, in complete congenital cleft of the soft palate, it is advisable to operate at all with a hope of complete or even partial restoration of function. Kingsley,* of New York City, has never heard or seen of the staphylorrhaphic treatment resulting in a perfect articulation. Cheever,† of Boston, says that "operations for the closure of cleft palate have been a disappointment." The latter attributes failure to lack of flexibility of the soft palate. Little, of New York, also believes that operative procedures for cleft palate should be discarded. These surgeons, and many others, declare that cases of this nature are better referred to the dentist for the adaptation of a mechanical appliance—so called obturator—which can be removed and adjusted at will. Owen and Clutton,‡ however, believe in an early operation, the former having operated for cleft palate successfully as early as the age of six months with complete restoration of function. Goodwillie§ asserts that oro-facial operations should not be performed later than the third year. The same writer also declares that restoration of function is to be expected in the lesser palatal defects. A recent authority|| states that the operation (staphylorrhaphy) should be performed before the child has learned to speak well, namely, between the ages of three and four years. The same authority also states that when the operation is performed later in life it will be impossible to remedy the defects of speech. Thus it will be seen that the concensus of opinion as regards the time to operate is decidedly in favor of the earlier period of life, not later, in fact, than the fifth year. Even at so early a period it is agreed that the outcome with reference to deglutition, phonation, perfect articulation, and the restoration of the flexibility of the soft palate is ex-

* *Boston Medical and Surgical Journal*, pp. 596.

† *Ibid.*

‡ *Lancet*, January 4, 1896.

§ *Medico-Surgical Bulletin*, May 2, 1896.

|| *American Text Book of Surgery*, pp. 676.

tremely problematical. It must not be forgotten in this connection that formerly staphylorrhaphy was not performed until after the age of fifteen years, or until the patient was old enough to withstand the operation without a general anesthetic, and also that the results obtained at this age have, in many cases, proven to an eminent degree satisfactory. It was not until Thomas Smith, of St. Bartholomew's Hospital, proved that excellent results could be obtained at an earlier age by the use of an anesthetic, and a mouth-gag devised by himself, that any attempt was made to operate during infancy.

Besides the relative age of the patient there are many other considerations which affect the prognosis in a given case. This is especially true of those cases which present themselves for operation after the age of puberty. In all cases the relative size of the cleft is important. The thickness of the palatal edges, their movement as affected by the palatal muscles (levator palati, palatopharyngeus, superior constrictor, etc.)—so-called resiliency of the soft palate—the presence of enlarged pharyngeal tonsils; their mycotic condition, as well as the presence or absence of lymphoid tissue in the vault of the pharynx; in short, the entire nasopharyngeal mucosa must be carefully inspected and any pathological or congenital defects noted. Cases have been reported of congenital absence of the bony septum in addition to the lesion of the palate due to non-development of the vomer. Hypertrophied middle turbinals are not uncommon. Besides, it is entirely possible to have a deflected and adherent septum. Again, the conformation of the palatal arch is important. The high Gothic arch, as described by Sir W. Fergusson, has a direct bearing on the prognosis in a given case, for it is evident that a low, slightly arched vault necessarily causes a greater tension on the tissues when united by sutures, although in the latter class of cases the voice is less nasal than in those with a high arch.

Another important consideration in older subjects is the peculiar distortion of features during an effort at phonation. This is due to the continuous efforts to close the nose and thus prevent the escape of air through this channel when attempting to converse, and is especially marked when the patient tries to pronounce certain words. For a like reason it is impossible for this class of cases to expectorate without first closing the nose with the thumb and finger. Later in life the compressors of the nose become so developed that the nose can be voluntarily occluded. The habit thus formed renders it difficult for the patient to relax the compressors

during phonation after the soft palate has been completely restored and the necessity for voluntary closure has ceased.

Finally, a condition by no means uncommon among those suffering from cleft palate is the presence of a chronic purulent inflammation of the middle ear. The writer has such a case under observation at present, in which there is a chronic suppurative process in one ear and a chronic catarrhal process present in the other ear. In both ears there is much impairment of hearing. There is also, in this case, more or less involvement of the hard palate, and deglutition, phonation, etc., are rendered possible by means of an obturator to which is attached an artificial velum. This device, although aiding in phonation and deglutition, is certainly irritating to the naso-pharynx, and there is, in consequence, a chronic traumatic naso-pharyngitis. The Eustachian orifices are more or less occluded by muscular spasm and the inflammatory process due to the mechanical irritation. Hence the involvement of the middle ear. During acute or suppurative processes in the middle ear the operation for restoration of the palate must be deferred until the ear lesion is cured or until the inflammatory condition has subsided. The writer, however, believes it entirely possible to operate successfully during a chronic suppurative process in the middle ear provided sufficient care has been observed in rendering and maintaining the field of operation and adjacent structures in as nearly a healthy and aseptic condition as possible. This is especially true in the case of an adult.

Before describing in detail the operation as usually performed and the operation as modified by the writer, a brief review of those conditions which make for a favorable prognosis in a given case is important. The patient (child or adult) should be in a good physical condition, namely, well nourished and free from any constitutional taint. The hiatus in the palate must not be too extensive, and the edges must have a certain thickness and elasticity in order, when united, to give a sufficient resiliency to the structure. It is possible in infancy to develop a defective palate by a direct manipulation of the parts. The absence of any congenital defect in adjacent structures greatly influences the prognosis as well as an hypertrophied or atrophied condition of the naso-pharynx. The age, as far as the outcome of the operation is concerned, does not materially affect the prognosis, and the writer believes that the restoration of function within a reasonable limitation as to age—infancy to twenty—may be confidently expected. Finally, if, with the mouth wide open, the sides of the cleft under the influence of

voluntary muscular action nearly or quite approximate each other throughout their entire length, a perfect result may be looked for.

For the successful surgical treatment of cleft palate the same rules obtain as to preparatory treatment as obtain in plastic operations elsewhere. The naso-pharynx, and the pharyngeal tonsils especially, should be rendered as nearly aseptic as possible with appropriate douches and sprays. The structures to be operated upon should likewise be rendered sterile. Just prior to operation and, in fact, occasionally during the operation, a well directed spray of some such preparation as "bensolyptus" is indicated and should be employed. This is especially true where a local anesthetic only is used, such as cocaine, etc. The discomfort of the patient due to the local anesthesia is in many cases very marked, and the extreme dryness of the pharynx thus produced almost intolerable. Briefly, the operation, as described in works on surgery, consists of denuding the parts by means of a "thin-bladed knife, especial care being observed to freshen the upper angle of the cleft." The sutures employed are given as silk-worm gut, horse-hair, cat-gut, silk and silver wire, in the order of their preference. Special stress is placed upon the needles used. To quote exactly one writer, "Special needles for right and left sides, in handles, are useful. Should none of these appliances be at hand, an ordinary sharp-pointed aneurism needle, or a half-circle Hagedorn needle and a needle holder, will be sufficient." After the sutures are introduced they are tied and allowed to remain in situ for about six or eight days. Where there is much tension on the structure the palatal muscles are divided just internal to the hamular process. Where there is little tension the division of the muscles is omitted. After division of the muscles the wounds are irrigated and an iodoform paint applied. Some surgeons use a hollow needle* armed with silk-worm gut, which they pass through both flaps, beginning at the lower part of the cleft. The ligatures are tied, beginning with the lower one. The majority of the writers consulted seem to prefer either the ordinary silk suture or the silk-worm gut, only one, Arthur,† expressing a distinct preference for silver wire, and that in connection with an involvement of the hard palate (osseous structures).

* Goodwillie—"Surgical Treatment of Cleft Palate in Children," *American Medico-Surgical Bulletin*, May 2, 1896.

† "A New Method of Treating Cleft Palate," *Medical Record*, February 20, 1896.

The operative procedure of the writer is necessarily a modification of the one just described. The instruments employed are the ordinary O'Dwyer mouth-gag—in case of general anesthesia a special self-retaining mouth-gag and tongue depressor is preferable—long seizing-forceps: medium length needle holder: long cervix scissors (see illustration, figure 1), curved on the flat: hemo-

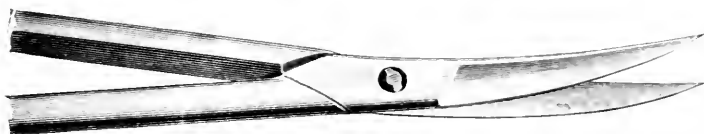


Fig. 1.



Fig. 2

static vulsellum forceps (see illustration, figure 2): several bayonet-pointed, medium-length cervix needles, threaded with silk for the introduction of silver-wire sutures: short Emmet tenaculum:



Fig. 3.

wire shield; forceps devised for twisting the wire, and several medium-sized silver-wire sutures (No. 27 preferred), bent at one extremity for introduction into the silk loop (figure 3).

The instruments having been carefully sterilized, the patient is seated directly in front of the operator and the tissues thoroughly cocaineized. The gag having been adjusted and held in place by an assistant, the silver wire sutures are at once introduced, beginning at the angle. One side of the cleft palate is now seized with the vulsellum forceps at the lower extremity and the edge cut by the scissors in such a manner as to leave a broad, *bevelled* surface. Both sides and the angle are thus carefully denuded. The sutures are now adjusted and twisted in such a manner that they assume, when completely approximated, relatively the shape as shown in the illustration (figure 3).

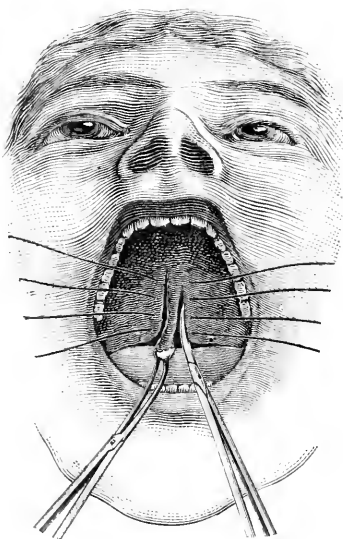


Fig. 4.

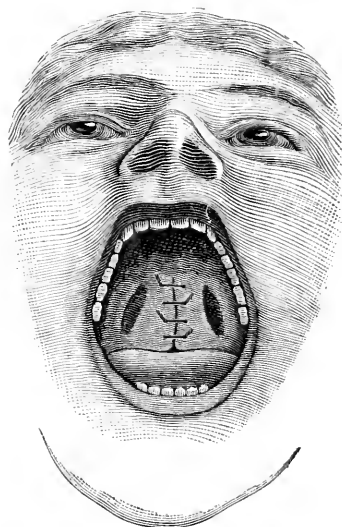


Fig. 5.

It will be seen from this illustration that the suture is introduced and twisted in the same manner as recommended by Emmet, of New York City, in plastic operations upon the cervix, *i.e.*, in trachelorrhaphy. When the sutures are all in place a deep, free incision is made just within the hamular process to relieve any undue tension. The sutures are never removed sooner than the fourteenth day, and they may remain in situ even for a longer period. The appearance of the completed operation is well illustrated in (figure 5.)

One of the special advantages of this method of operating consists in the use of the curved scissors for denuding the edges, which, in the process of denudation, makes it possible to form a broad, *bevelled* surface. This is important and would be impossible to accomplish in any other way. It is only thus that a successful result, both as regards union and permanency of structure, can be obtained. Again, the silver wire sutures used in the manner described cannot only be easily and accurately introduced, but can also be allowed to remain indefinitely in the tissues. Finally, the introduction of the sutures as the first step in the operation is an important modification of the usual operative procedure in these cases. The advantage of this step consists in the possibility of controlling hemorrhage when excessive and the avoidance of any undue obstruction to the field of operation during their introduction.

The importance of the after-treatment in staphylorrhaphy, especially when accompanied with an extensive myotomy, cannot be overestimated. Besides, after complete restoration of structure, there are problems of habit, and those connected with the restoration of function, which require the greatest vigilance and skill on the part of the surgeon to solve. The after-treatment and methods devised for a restoration of function will be considered in the report of the case which follows:

E. W. M., of Spokane Falls, Washington, was referred to me by his uncle, a prominent neurologist of this city. The following history was obtained: Father left Brooklyn on account of attacks of asthma and has never been in good health: mother always strong and healthy: family history generally good. Patient, now nineteen years of age, is the oldest of several children and was born in Brooklyn prior to father's removal to Spokane Falls. Has had two operations for cleft palate. First one at the age of seventeen years and the second one year later: both failures. Silk sutures were used in both instances. Surgeon said that the "muscles were too strong and that union could not take place." Patient was advised against further operation and was referred to a dentist. After several trials the dentist failed to make an appliance that could be retained. Patient has always been healthy, and had been employed in a saw-mill up to the time of his departure for Brooklyn. Had tried on several occasions to blow a cornet, but never could produce a tone. Had noticed difficulty in pronouncing words beginning with such letters as "S," "C," "K," "Q," etc. Vocalization always difficult when the lips are approximated or the tongue raised to the roof of the mouth.

An examination made in October, 1897, revealed the following conditions: General appearance fairly good. The naso-pharynx presented the usual picture of an extensive atrophic rhinitis and pharyngitis sicca. This condition was accompanied with anosmia. The breath was malodorous and fetid, the pharyngeal walls were covered with an inspissated, sticky mucus. The soft palate presented an extensive fissure extending to the hard palate. On the left side there was attached a rudimentary uvula, and the free edges were quite thick and composed mostly of scar tissue. During an attempt at phonation the parts were forced well back towards the wall of the pharynx, showing a strong muscular development. During phonation, also, there was a characteristic closing of the anterior nares and "knitting together" of the eyebrows as well as a simultaneous elevation of the upper lip. Deglutition was extremely difficult, food always entering the nasal cavity, and articulation was very much embarrassed. Expectoration was only accomplished by pinching the nose tightly between the thumb and finger. There was a chronic suppurative process present in the left ear, hearing distance being reduced to two inches for the watch, and an atrophic condition of the right membrana tympani, the drum membrane being adherent except in the posterior inferior quadrant. Hearing power for this ear was reduced to close contact for the watch. The light reflex was entirely destroyed, the drum membrane retracted and the long process malleus drawn upwards and backwards, being markedly fore-shortened.

Immediate treatment of the naso-pharynx and suppurating otitis media was instituted, with the result of markedly improving the former and entirely curing the latter.

On January 5th, 1898, the operation of staphylorrhaphy was performed. At the time of the operation the relative size of the cleft in the palate is accurately illustrated in the drawing (figure 4), with the sutures in place. Seventeen days after the introduction of the sutures they were removed. Union was perfect throughout and the lateral wounds had nearly closed by granulation.

The treatment used during the healing process was the same as that instituted prior to operation, namely, thorough cleansing of the parts with Dobell's solution, followed by borsolyptus in full strength, and the thorough application of Mandel's solution No. 1, by means of a cotton-tipped applicator. Conversation was limited as far as possible, and only liquid food allowed for the first ten days following the operation. When the tissues had completely healed, and there seemed to be no danger of separation, the patient

was directed to begin speaking in low, deep, guttural tones, using such words as "cup," "up," "out," "very," "silent," "search," "calm," "catch," "cough," "cold," "quick," etc., words, as before indicated, beginning with certain difficult letters to pronounce. This practice has resulted in marked and continued improvement. There has also been added to this vocal exercise an exercise for increasing the flexibility of the soft palate. This is accomplished by requiring the patient at regular stated intervals to blow through an ordinary spool, with one end whittled off for a mouth-piece—a device adopted by singers for developing lung capacity. The continued repetition of this, and similar exercises, has resulted in perfect deglutition, almost perfect phonation and a resiliency of the soft palate that nearly approaches the normal.

The points of interest in this case are: First, the absence of any maternal influence, the father only being asthmatic. Second, the possibility of success after several failures, both operative and mechanical. And third, the probability of complete recovery of function.

Since writing the above the patient informs me that a persistent loud ringing tinnitus, which he formerly had, has nearly ceased, the dryness of the pharynx seems to be entirely relieved, and that it is now possible for him to expectorate with entire freedom. The writer has also found that water introduced by means of the nasal douche in one nostril runs out of the opposite nostril without entering the throat.

179 Schermerhorn street.

A Case of Primary Epithelioma of the Uvula WALKER DOWNIE.

L. B., Glasgow—*Scottish Med. and Surg. Jour.*, January, 1899.

Dr. Walker Downie relates a case of this somewhat rare primary condition. The patient was a male, aged fifty-six years, who had suffered for two months from sore throat, which had finally interfered with the power of deglutition. On examination, the uvula was seen to be enlarged, while anteriorly and laterally the surface was ulcerated; it was hard and firm on palpation; it bled readily. There were no enlarged lymphatic glands. The uvula was removed under cocaine, the incision being made free from the tumor. Microscopic examination showed the growth to be epithelioma. Seventeen months after the operation, no recurrence had taken place.

A. LOGAN TURNER.

ADENOID VEGETATIONS. WITH ESPECIAL REFERENCE TO THEIR INFLUENCE UPON THE EAR.*

BY A. W. CALHOUN, M.D., LL.D., ATLANTA, GA.

Adenoid hypertrophy at the vault of the pharynx is by no means a new subject. Still it has many relevant features of sufficient importance to warrant emphasis—points of interest which may be profitably discussed.

It is not my intention to dwell upon the minute pathology, nor upon the history of this naso-pharyngeal foreign body; but, rather, to speak, in a disconnected way, of personal experience acquired through clinical investigation, which I trust may add to our present information upon this subject.

Hidden in the naso-pharyngeal vault of many children are to be seen, with the help of a proper mirror, these adenoid growths, which, under certain conditions, exert a serious influence upon the child's future physical and mental development.

The naso-pharynx is a small but important cavity—important because of its relation to the nose and ears. Being a part of the respiratory tract, it follows that any serious obstruction at this point to the free and easy passage of air to and from the lungs greatly impairs, almost to exclusion, the usefulness of this portion of the respiratory tract, for which, of course, must be substituted the mouth. In the act of respiration the nasal cavities perform vital functions—they warm, moisten and cleanse the inspired air.

It is evident, therefore, that obstructions of this nature must produce certain pronounced symptoms. The infant at the breast, for obvious reasons, finds difficulty in feeding, which, in many cases, results in malnutrition. This is far from uncommon, though often ascribed to other causes. In many instances the adenoids are not large enough to entirely close the nasal cavities, but sufficiently obstructive to make mouth-breathing much easier, which practically eliminates the physiological functions of the nasal mucous membrane as to respiration. That the mouth and throat do warm, moisten and filter the air to some extent is not denied; but that mouth-breathing is unphysiological is evidenced by the fact that such persons suffer with dry throats, causing restlessness in sleep with

* Read at the meeting of Southern Section of the American Laryngological, Rhinological and Otological Association, March 28, 1898.

tendency to wakefulness, to be followed the next day by a general irritability, head-ache, etc. Perhaps many of you have noticed that children with adenoids are much more susceptible to croup, laryngitis, bronchitis and pneumonia than others. The reason of this is plain: for the special office of the nose is that of a door-way through which the inspired air shall pass to become properly prepared before entering the lungs. Interference with the respiratory function of the nose is fraught with many more ills than we are at first sight apt to admit. It is true that many of these symptoms are not alone dependent upon the presence of adenoids, and that *any* obstruction of the nasal cavities may produce very similar symptoms. But it should be remembered that other pathological conditions at this point are much less frequent in early childhood than adenoid hypertrophy and more readily seen and diagnosed.

The chief characteristic of this hypertrophied spongy mass is that it is soft to the touch, friable and easily broken down: but I wish to call attention to the fact that we sometimes find another form much more difficult to deal with. In this variety the growth assumes the nature of a well-marked tumor, with a base of considerable size, a smooth, firm surface and of substance composed largely of fibrous elements. I have found this variety peculiar to older children or young adults, and it requires repeated examinations to rid one's mind of the idea of malignancy. The dense structure makes the operation for removal much more difficult than in the other cases, though I find this variety just as amenable to treatment.

Just at this point I desire to again direct your attention to an interesting fact, viz., that children in this southern climate are much less subject to adenoid vegetations than in more northerly climates. In our climate it occurs frequently enough, it is true, as each one of us can bear witness, but when we compare its frequency here with that in the more northern sections of our country, where one writer tells us it is almost universal, we are justified in suggesting southern climatic conditions as preventive if not, indeed, curative.

It is a curious fact, which I will mention in this connection, that I cannot now recall ever having seen a negro child suffering with adenoid hypertrophy. I don't believe they have such a disease. The colored race, as you know, is practically exempt from a number of diseases not uncommon to the white race. But here with us we find hypertrophied tonsil in both races a most prevalent trouble, and if we are not careful in making a thorough examination we are apt to overlook the fact that adenoid vegetations may and do frequently exist, in white children, at the same time with enlarged tonsils. So

we find excision of the tonsils alone often fails to relieve, making the combined operation necessary to a perfect cure.

The question is sometimes asked if adenoid growths are not more frequent to-day than in former years. I think the answer lies in the fact that formerly the surgeon regarded the *hypertrophied tonsils* as the *cause* of all these symptoms. He overlooked, what is now recognized, that behind the enlarged tonsils we often find adenoid hypertrophy, and was surprised that tonsillotomy alone brought no relief to the little sufferer. Nowadays the double operation is frequently done, and with the very best results. We all recognize the typical child with adenoids: the vacant face, the open mouth and hanging jaw—the curiously-toned voice, the flattened nose, the history of snoring at night and dribbling onto the pillow, the nasal discharge, diminished hearing and recurring head-aches. Such children, though faithful in study and quick at learning, always get the name of being dullards, because of their facial expression and affected hearing. Certain *reflex* symptoms are also often associated with this condition of things. Asthma, stammering and other defects of speech are excited reflexly, just as they are by direct obstruction of the nasal cavities. Incontinence of urine is another of the reflex symptoms, and operations have been made upon the adenoids with the chief end in view of relieving this most distressing symptom, and with gratifying results.

But I wish to speak mainly of the influence upon the ear exerted by adenoid vegetations. Deafness, to greater or less degree, is present in the larger percentage of these cases. Early in the disease the loss of hearing is moderate and noticeable only occasionally, but the intervals become less and the diminution in hearing becomes more marked as the disease advances.

Direct pressure upon the mouth of the Eustachian tube rarely occurs, and yet its function is so frequently interfered with that contraction or sinking in of the drum-head follows, resulting in deafness more or less pronounced. Perhaps the aural symptoms are due to the swelling of the mouth of the tube, or an extension of the inflammatory process through the tube into the middle ear. Mouth-breathing and the blocking of the post-nasal space change the air currents and alter the pressure about the mouth of the tube; the growth hinders the free action of the muscles controlling the lumen of the tube and permitting the entrance of air into the middle ear. This condition causes defects of hearing, which increase as the pathological process develops. This process sooner or later ends in chronic catarrhal otitis media, with ankylosis of the ossicles. In

addition to this, a true suppurative inflammation of the middle ear may and does, not infrequently, result from the presence of this adenoid mass. Not much stress is laid upon this symptom by most writers on this subject; but beyond question, adenoids not only frequently produce otorrhea, but prolong the attacks and cause recurrences, even though the suppuration might not, originally, have been dependent upon their presence. When a suppurative otitis-media does not readily yield to proper and vigorous treatment, or when at intervals the child has recurrent attacks, a digital examination of the post-nasal region will often reveal the existence of adenoids. Their removal in most cases gives prompt and satisfactory results in the cure of the offensive middle-ear discharges. The explanation is probably found in the fact that hyperemia from rarefaction of the middle-ear mucous membrane leads to hypersecretion, which, occurring in a closed cavity, is converted into pus. There can be no doubt of the fact that non-suppurative inflammation of the middle ear takes place in a large majority of cases with adenoid hypertrophy, but the process does not always stop with this. It progresses to suppuration with its train of ills, with which we are all familiar.

The early recognition and removal of the cause relieves the child of many present and future dangers. Positive diagnosis ought not to be difficult. It can be made ocularly by posterior rhinoscopy, and digitally by examination with the forefinger in the post-nasal space. In young children I prefer the latter method, which I find most satisfactory. When the tip of the examining finger reaches the pharyngeal vault, at once will be felt the characteristically soft, boggy adenoid growth, more or less filling the space and encroaching on the upper portion of the nasal septum.

Treatment.—It is not in every case of this disease that operative interference is needful or desirable. Those of you who, perhaps, make a routine practice of examining the post-nasal space in children consulting you, will call to mind many cases of moderate accumulations of adenoid vegetations with no accompanying bad symptoms whatever—both child and parent being unaware of any such trouble. A postponement of operation is wise in such instances, but the child should be watched, and treatment promptly instituted upon the appearance of any of the well-known symptoms. When any of the before mentioned symptoms are present, however, the question of treatment becomes imperative, since the hypertrophy is a constant menace to the healthfulness and happiness of the little patient. The results of operative treatment are often immediately brilliant and

almost invariably satisfactory in the end. Now and then recurrences do occur, necessitating other operations, and occasionally alarming hemorrhage follows, but, as a rule, the removal by operation is devoid of danger, and should be made as thorough as possible.

The question of the use of local or general anesthetics, as well as the choice of instruments—whether curette, snare, or forceps, or the finger nail—are matters to be determined by the experience of each individual operator. But let me again impress the fact, that this adenoid mass is a real foreign body in the naso-pharynx, frequently productive of serious conditions, especially such as affect the ears. Its early recognition and thorough removal becomes an imperative duty to the surgeon.

PERSISTENT OS ORBICULARE.*

BY BERNARD BERENS, PH.B., M.D.

Member Philadelphia County Medical Society, Pathological Society, Etc.

The specimen from which illustrations were made was taken from a patient who had died the day before of cirrhotic kidney, aged sixty-three years. Normally in the adult the long process of the incus terminates in a globular formation called the os orbiculare or



lenticular process. In the specimen this process is separate and distinct and is connected with the incus by fibrous tissue. As far as known, this specimen is unique, showing a persistent separate bone at sixty-three years of age.

*Exhibited to Eastern Section American Laryngological, Rhinological and Otological Society, Washington, D. C., January, 1899.

SCALDING OIL IN THE EAR AND THE RESULT.

BY W. A. MARTIN, M.D., SAN FRANCISCO, CAL.

Mr. L——, a young man of twenty-six, consulted me concerning his ear the 17th of last September. He stated that a few evenings before he was complaining of a dull feeling in the left ear. The mistress of the boarding house, being up-to-date, of course had a remedy that never failed. Instead of bringing forth the traditional onion she filled a tablespoon full of olive oil and heated it over the lamp. When, in her judgment, it was warm enough she poured it into the young man's ear. The effect was magical in so far as the dull feeling was concerned, as it was immediately supplanted by an exceedingly lively one. When the pain had subsided, they wisely concluded that the proper thing would be to fill the ear with cold vaseline, which was done. When I saw the unfortunate man I found the following condition:

The external ear, tragus and antitragus were scalded, the blebs having already broken, the external auditory canal was filled with vaseline, which I removed by syringing with warm water. The membrana tympani was concealed by a bleb that filled the inner third of the canal. This ruptured on being touched with a probe and about a drachm of serous fluid escaped. A pulsation could then be seen, showing the membrane had at the same time been ruptured. I dried the parts with absorbent cotton and dusted with iodoform, which was the treatment pursued throughout. Quite a lot of necrotic tissue was exfoliated during the course of the following two weeks, but at no time was there any formation of pus. When the field was finally clear there was a large, kidney-shaped perforation of the lower half of the membrana tympani, the lower third of the hammer projecting into the opening.

The perforation diminished in size during the several weeks' treatment, but as it finally came to a standstill, and the ear being dry, I despaired of accomplishing anything further and ceased treatment.

The young man called to see me on December 19, when I examined the ear and was surprised to find the membrane intact and the hearing almost normal. Without the history of the case one would be unable to say positively that there had ever been a perforation. There was an indistinct line showing the limit of the former perforation, which could be detected by one familiar with the case.

I account for the almost complete restoration of the hearing by the fact that there was at no time any sign of suppuration and consequently no disturbance of the mechanism of the middle ear, the trouble being confined entirely to the membrana tympani and the external ear. I report the case as it shows how extensive an injury, with almost complete restoration, will be tolerated by the membrana tympani if there is no infection.

Spring Valley Building.

Perforation of the Drum Membrane — R. KAYSER—*Sammlung zwangloser Abhandlungen aus dem Gebiete der Nasen- Ohren- Mund- und Hals-Krankheiten.*, III Band, Heft 3.

This is a most excellent monograph of thirty-four pages, and may almost be considered an epitome of our knowledge of drum-head perforations. The author divides them into three classes: (1) Congenital. (2) those caused by disease. (3) traumatic perforation. The congenital class is dismissed with a few words as of little practical importance on account of its rarity. The second class is divided into active and passive perforations. The active perforation is caused by pathological processes in the drum-head itself. The passive come from pressure of fluids in the tympanic cavity. Active perforations do not heal readily and are prone to become chronic or permanent. Passive perforations, on the other hand, heal very readily. The traumatic class is divided into direct and indirect perforations, the first where the membrane is itself penetrated by some foreign body, the second caused by changes in air pressure on either side of the drum-head or by bone conduction as in fracture of the base of the skull, etc. The author gives a curious list of the expedients that have been adopted for the purpose of demonstrating the presence or absence of a perforation. In the treatment of long-standing perforations he favors the use of trichloroacetic acid. The traumatic class is of importance because they frequently give rise to medico-legal questions. They are, as a rule, easily distinguished from those perforations brought about by disease. The traumatic perforation is apt to be much more irregular in shape, jagged and angular. In addition to this there are almost invariably minute blood-clots along the edge of the rupture. If the opening permits a view of the tympanic cavity the tissues there do not have the appearance of long-standing inflammation but are of a pale grayish-yellow color. The treatment is purely expective.

VITUM. (GOLDSTEIN.)

HEALTH RESORTS OF COLORADO.

BY SETH SCOTT BISHOP, M.D., LL.D., CHICAGO, ILL.

Professor of Diseases of the Nose, Throat and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital; Consulting Surgeon to the Mary Thompson Hospital, etc.

Several visits to various Colorado resorts, and a brief residence in Manitou Springs last summer, following the meeting of the American Medical Association in Denver, have afforded us opportunities for studying the important characteristics of these sanatoria, and of recording the principle features of interest for the benefit of our patients. So far as travelling is concerned, it is superbly interesting and delightful north, south, and in any westerly direction, from Denver, including trips to Georgetown, Glenwood Springs, Cripple Creek, Pike's Peak and the numerous mining camps and great cañons among the Rocky Mountains. But, to bring the present communication within readable limits we will confine our observations to the vicinity of Pike's Peak, at the base of which nestles the Carlsbad of America, Manitou Springs.

This is an unusually pretty mountain town of 1,500 inhabitants "out of season," that is, when the tourist travel is at its lowest ebb, but it is said that 125,000 tourists visit the village annually. It is pre-eminently a pleasing pleasure resort, abounding in first-class hotels and boarding cottages and has an elevation of 6,297 feet. It is nine miles from the summit of Pike's Peak, with which it is connected by a cog-wheel railroad. Beautiful Colorado Springs lies about five miles to the eastward, and is conveniently reached by electric and steam cars, and eighty miles to the north is Denver. So here are all the charming traits of a sequestered hamlet united to all the desirable advantages of life in a city hotel or a quiet cottage.

The distinguishing peculiarities of this locality, for our purpose, are its high, dry, sunshiny and equable atmospheric conditions. The rainfall is generally light, although our experience last summer with the terrific, drenching thunder storms that came up nearly every afternoon over Pike's Peak was something phenomenal. The peals of thunder, crashing and resounding among the mountains, would seem sufficient to rouse the dead. At another season it so happened that all this mountainous region was flooded by raging torrents, and railroads and bridges were washed away, but such experiences are exceptional and extreme. We mention them merely to be fair and impartial.

Even during these storms of the afternoon the hotel guests seemed to derive much satisfaction from the unusual and picturesque demonstration of the elements. It is, indeed, grand and inspiring beyond the feeble power of tongue or pen to portray. But, no sooner does the last fleeting cloud bid adieu to the silent snows above Gog and Magog than all the gay tourists surge suddenly forth, filling the streets with merriment, for all are on pleasure bent. So soon does the thirsty soil drink up the weeping clouds.

We are indebted to Dr. Basil B. Creighton, physician to the Mont Calme Sanitorium of Manitou Springs, for his kindness in favoring us with the results of his studies of the temperature and humidity of both Manitou and Colorado Springs. The great dryness of the latter place, which lies on the plain 300 feet below Manitou, is well known. During July and August the very dry condition of the surface soil occasions at times a blinding reflection of the sunlight, uncomfortable heat and considerable dust. One remarks at once the large number of people there wearing colored glasses. Sufferers from hay fever and coryza would be in misery under these conditions. But there is an abundance of shade at Manitou, for cool, refreshing breezes float down the valley from the west through far-famed Ute Pass, to temper the heated air.

Dr. Creighton's statistics show a lower humidity than prevails in cities on the plain, and a climate so equable that "the invalid can remain out of doors the greater portion of nearly every day. In winter, while the temperature is elevated above that of the adjacent plain only a few degrees, the protection from the winds afforded by the mountains is so great that there seems to be a difference of five to fifteen degrees."

There are other considerations of undoubted value. There are no factories to pollute the air with suffocating smoke, but the pines upon the mountain sides breathe down their fragrance-laden breath on the grateful valleys beneath. It has been said that a change of scene is more important than the scene itself. But here we find an incomparable combination of all those climatic conditions that contribute to health: and capping the climax of Nature's resources for restoring strength, our eyes feast upon the calm, quiet and peaceful landscape of the plain, or drink in the most magnificent and awe-inspiring mountain scenery of which the world can boast.

The springs of Manitou, like those of Carlsbad, are a natural wonder. There is a resemblance in the abundance of saline ingredients and in their varying composition, but they are unlike the Carlsbad Springs in temperature, for they average fifty-three degrees.

There are no boiling springs here, except the boiling that is due to carbonic acid gas, in which they are rich. This is particularly true of the popular Manitou Spring, which is well known throughout the country and is used most extensively by the inhabitants of the village. This spring is always open freely to the thousands who visit it not only to drink their bubbling draughts, but to carry away their supplies for the day. The procession begins early in the morning, many of the visitors carrying bottles suspended from strings, reminding one of the procession of nations at Carlsbad, each invalid carrying his little cup in hand or attached to his person: from the polish Jew in ancient garb to the prosperous, well-fed Briton, tramping in single file like the grand entrance act of a serio-comic opera.

The Manitou, Navajo and Cheyenne springs belong to the soda group. The Shoshone is a saline purgative spring, and there are others said to contain iron. These waters can be utilized in treating many of our patients. Besides these natural springs, the town is supplied with good water fresh from the mountain streams through a system of pipes, at a pressure of 100 pounds or more to the square inch, without the necessity of a pumping plant.

It is said by those who practice medicine in these high altitudes that the blood gains in richness and quantity rapidly, and that patients respond more readily to treatment than in the low altitudes: and this brings to mind the unique experiences as we drive about the Garden of the Gods, the cañons and mountain passes with different coachmen. They all have come to Colorado for their health, were "going with consumption" in the East, having had cough, expectoration, hemorrhages, etc., but have been free from all these symptoms for many years, thanks to the climate of Colorado.

This is the tale that is told on every hand, in Denver, Colorado Springs and many other localities. At first the suspicion may dawn on the mind that this universal story may be in the nature of a commercial enterprise to induce the tourists with plethoric purses to come and stay and spend their surplus funds, but further acquaintance with the facts and with physicians dispels the doubt. These rosy-cheeked knights of the whip and lines are living proofs of a climate's power.

Manitou has always been a summer resort for tourists, especially well patronized by Southerners, but it ought to be known as one of the leading health resorts of the world. There is already a small, but beautiful sanitorium conducted by the Catholic Sisters, under the supervision of a cultured and genial gentleman, who is the parish priest.

During weather which was exceedingly hot in lower altitudes, when we were reading daily of suffering and heatstrokes, we experienced no discomfort here. Showers are sufficiently frequent to cool the air and prevent an excess of dust. The ground has such a slope as to drain the rain very quickly, and the water rapidly percolates through the soil, the upper stratum of which consists of gravel.

Dr. Creighton says of the village: "It is never sultry. The nights are cool and inviting to sound slumber under woolen blankets. There are no pests, no mosquitoes and no fleas. The winters are admirable. Autumn and winter constitute the dry season, when the days are sunshiny and bright and there is little precipitation. There is no rain, and exceedingly little snow. The wind movement is usually barely perceptible and never great. Observations as to relative humidity and mean temperature, in the absence of wind, prove Manitou to be possessed of an enviable winter climate. With a dry atmosphere, low percentage of relative humidity, great equability, absence of dust, large amount of sunshine, with natural carbonated springs of soda, sulphur and iron and a bath house, a moderately high elevation, pure air, pure water and sublime scenery, Manitou possesses natural attractions unequalled in America."

103 State Street.

Complete Rupture of the Trachea—EX.—*New York Med. Jour.*,
October 22, 1898.

The patient, a man of fifty-three years, was struck by an elevator on the back of the head while looking down the shaft. He was knocked down and the sternum broken, but he survived the accident for fourteen days. The rupture of the trachea was discovered at the autopsy.

Several cases are on record, the principal symptoms being urgent dyspnea, and much subcutaneous emphysema, the result usually being death. Three cases of recovery are recorded, however, two by Lany and Wagner, and the other by Lauenstein with tracheotomy.

SCHEPPEGRELL.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, January 25, 1899.

Robert C. Myles, M.D., Chairman.

A Modified Krause Curette.

Dr. C. G. Coakley presented a modification of the double curette of Krause, with a modification of the Schrötter handle. He said that it had probably been noticed by others that as one pulled on the stilette the curette was raised from the tumor, and that consequently a smaller piece of the growth than was intended was removed. To obviate this he had had constructed a hollow canula, running through which is a stilette. The stilette carries with it a movable shield. The pincette itself does not move up and down; it is closed by sliding down the shield upon it.

The Bernays Sponge in Nasal Surgery.

Dr. W. Kelly Simpson said that at the last meeting of the American Laryngological Association he had read a communication concerning the application of the Bernays sponge to the control of hemorrhage in the nose. These sponges are made of cotton fiber strongly compressed into circular discs. Very recently, at his request, the manufacturers, Johnson & Johnson, have made these sponges in the shape of a nasal splint, two sizes, which makes them better suited for introduction into the nose. Owing to the fact that they absorb very rapidly, they are capable of exercising a certain amount of pressure. They are more efficient than absorbent cotton or gauze tampons, both from ease of application and in result. The action is very rapid, but may be made still more so by stripping off the outer smooth layer. They are useful in nasal surgery for the application of antiseptics, or of cocaine, or as splints in septal operations. The degree of compression, of course, depends upon the relative size of the sponge and of the individual nasal cavity, but he had not heard his patients complain on the score of pain from excessive pressure.

Dr. Francis J. Quinlan said that three years ago he had used, in a case of alarming hemorrhage, a specimen of wood fiber. In about thirty-six hours afterward there had resulted a very severe acute inflammation of the frontal sinus, evidently from pressure and faulty drainage of this pneumatic space.

Dr. W. F. Chappell said that he had used these Bernays sponges as nasal plugs, and considered them one of the most important recent contributions to nasal surgery. To prevent the hemorrhage, which is apt to follow their removal, because of adhesion to the tissues, he now covers the cut surface with gutta percha. The gutta percha used by him is that employed by dentists, and comes in the form of pinkish sheets, about one-sixteenth of an inch in thickness. He has also made the same application of the gutta percha in septum operations and in adhesions, applying one piece against the septum and another against the turbinate.

Dr. J. E. Newcomb said that he had used, with satisfaction, the ordinary rubber tissue as a covering for all forms of nasal plugs.

Dr. Jonathan Wright said that five or six years ago he had called attention to these gutta percha plates and had found them entirely satisfactory. He used the Bernays sponge in the nose several times, but abandoned it because it became foul much more quickly than the materials commonly employed.

Dr. Lewis A. Coffin said that he wished to give his testimony in favor of the Bernays sponge both as a plug and splint. He had used it both with and without the gutta percha plates and had not noticed a greater tendency to become foul than was the case with other plugs. His practice was to saturate the sponge with a solution of antitartrate of alum after it was in place, both for its astringent and antiseptic properties.

A Recent Case of Tonsillar and Laryngeal Diphtheria in which Antitoxin was Employed.

Dr. N. S. Roberts reported this case. The child was first seen by him on the evening of December 26. The patient was five years old, and showed evidence of laryngeal and tonsillar diphtheria. The parents would not consent to the use of antitoxin at that time, so bichloride of mercury was used both by the stomach and locally. The nasal cavities were washed out with normal saline solution. The child was seen frequently and applications made to the patches on the tonsils. On December 28 peroxide of hydrogen, properly diluted, was substituted for the mercurial application, and then the membrane began to disappear. The laryngeal symptoms becoming aggravated,

calomel fumigations were used the following day, but with only temporary benefit. At 9:30 a. m. on December 30, 750 units of the Board of Health antitoxin were given as an initial dose, and the other treatment was practically suspended. Five hours later, it was found that the child was able to talk fairly loudly for the first time in three days. In thirty-six hours the membrane had completely disappeared, the breathing was perfectly free and the voice was only slightly husky. No eruption and no albuminuria followed the use of the antitoxin. The chief points of interest were: (1) The good result in spite of the injection not being administered until the fifth day, and at a time when the outlook was bad; (2) the very moderate dose employed; and (3) the rapid and uninterrupted improvement.

Dr. F. J. Quinlan asked for the experience of the members regarding the degree of laryngeal stenosis observed since the introduction of antitoxin, and as to the need for intubation at the present time as compared with pre-antitoxin days.

Dr. Emil Mayer said that he was surprised that Dr. Roberts' patient did not drop dead as a result of his foolhardy act of getting out of bed while suffering from diphtheria, and within a few hours after the administration of antitoxin.

There was no single direction that the speaker gave in the treatment of this disease that was more imperative than that of keeping religiously to a recumbent posture and he would consider it reprehensible for the physician to allow a patient on the fifth day of the disease to walk or even be carried in an upright position into the next room, there to sit upright on a vessel.

Dr. W. Kelly Simpson thought there was little doubt but that the advent of antitoxin had greatly reduced the number of cases requiring intubation: one might almost say that no case receiving antitoxin sufficiently early need require intubation.

Dr. N. L. Wilson, of Elizabeth, asked Dr. Mayer if he thought the danger of cardiac paralysis was greater since the introduction of antitoxin.

Dr. Mayer replied in the negative.

Dr. Wilson then said that he knew of a case in which death had occurred three hours after the administration of the antitoxin, but apparently independent of it. He cited a case of laryngeal diphtheria in which antitoxin was given and intubation at once performed by himself. The grandfather of the patient, an old-time physician, was much annoyed when he learned that antitoxin had been used, and insisted that the intubation tube be removed at the end of twenty-four hours. This was done, Dr. Wilson said, and it had taught him a

lesson, for it was not necessary to reinsert it even after this short time. Formerly he had been accustomed to leave in the tube for seven to nine days, and while it did not follow that in every case the tube could be safely removed after such a short time, the experience was certainly suggestive. He now removes the tube in from five to six days. There is no doubt in his mind as to the efficiency of antitoxin.

Dr. Jonathan Wright spoke of a case in which an adult who was about to receive an injection of antitoxin got up and walked across the room and dropped dead before the antitoxin could be injected. He pertinently remarked, that if this death had occurred shortly after the administration of the antitoxin the death would have been attributed to the use of this remedy.

Dr. Simpson said that he did not think it had been proved yet that one could remove the intubation tube much sooner than in the days before antitoxin. It was far better, in his opinion, to leave the tube in a day or two longer than to remove it too soon.

Dr. Roberts, in closing the discussion, said that whereas he had formerly been called upon quite frequently to intubate, it had now become almost a lost art with him because of the use of antitoxin. Undoubtedly the use of antitoxin forestalls the need for intubation in many instances.

Pharyngitis and Tonsillitis in Infants.

Dr. Henry Dwight Chapin read a paper on this subject. He said that he had such difficulty at times in satisfactorily examining the throats of young infants that he had devised a tongue depressor for this special purpose. Most tongue depressors in use do not have the proper slant; they should curve forward over the base of the tongue. His own instrument was exhibited. In infants, he said, pharyngitis and tonsillitis are usually associated. In rare instances the uvula is infiltrated. The primary form of pharyngitis is apt to be overlooked. The swelling of the lymphatic glands of the neck was not usually present in this form. The frequent mistakes in feeding infants result in acid fermentation in the stomach, and by direct continuity the mucous membrane of the throat and mouth may become inflamed. There may be more or less persistent vomiting, continuous temperature and diarrhea. The other form of pharyngitis and tonsillitis in infants is due to exposure to cold. This is often the result of clothing the children so warmly that they perspire excessively and catch cold on the slightest provocation. While acute pharyngitis is not usually serious, it is commonly the starting point of a

chronic condition, leading to hypertrophy of adenoid tissue at the vault of the pharynx, and also affording a favorable soil for the lodgment and growth of diphtheria and tubercle bacilli.

Dr. Henry Koplik agreed with the reader of the paper that, in examining the throat of an infant, if the first attempt were not successful the second would be made more difficult by the struggles of the patient. The infant should be held by the mother before a proper source of light, preferably a large window, as recommended by Henoch. The physician then introduces an inflexible instrument—either a spoon or some favorite style of tongue depressor. As to the frequency of tonsillitis in infants, he would say that simple follicular tonsillitis is quite common in infants only a few months old. Of course, the follicles were exceedingly minute, but it is perfectly easy to prove the truth of this assertion. Some time ago he had made an investigation into the value of swelling of the lymph glands in differentiating between simple tonsillitis and septic diphtheria, and had come to the conclusion that the condition of these glands was of very little value at the first visit in making the diagnosis. He was of the opinion that tonsillitis is a distinct infection, and not due to the cold alone: it was the result of directly carrying the infective agent to the tonsil in any one of numerous ways. Tonsillitis certainly does not occur from absorption through the respiratory apparatus, because young infants breathe with the nose, except under pathological conditions. When the inspired air passes through the nose alone it must necessarily be subjected to a good deal of filtration before reaching the throat. Cold may be said to be a predisposing cause as in other diseases.

Dr. Clarence C. Rice said that he personally saw very few young infants, and consequently could not speak on this subject with authority. It was no doubt a difficult matter to examine an infant's throat, but why should not the physician make the first attempt certainly successful by assuring himself that everything was in readiness before beginning the examination? He would like to ask if it were not feasible under such circumstances to use a mouth-gag. It should not be forgotten that inflammatory conditions of the faucial tonsils are very intimately related to inflammation of the lymphoid tissue behind the nose at the base of the tongue. There was too great a tendency to consider the faucial tonsils by themselves and independently of their relation to the naso-pharynx. He would like to know whether exposure to cold and disorder of the stomach give rise to different varieties of tonsillitis.

Dr. Coffin said it was well to use a head mirror in examining the

throat, if at hand, as it is often difficult to get a patient's head, or the light so held as to give a good view of the throat; that as a rule those things about which we gradually know more and more are the most interesting to study; but with tonsillitis it is quite different—our interest arising from the fact that we are gradually knowing less of the subject. It was not so very long ago that most of us felt that we knew a case of tonsillitis when we saw it, but to-day it is a bold man who would declare his ability to diagnose tonsillitis.

We are told that it is a manifestation of rheumatism, and again that it is due to an invasion of germs, and now to-night that it comes from taking cold or a disordered stomach, and in no case can it be positively said the condition is not diphtheritic and produced by the Klebs-Löffler bacillus.

His own opinion was that any agent capable of acting as an irritant to the mucous membrane of the fauces might cause a tonsillitis. Most of us had traced tonsillitis to poor plumbing. He felt that tonsillitis might be caused by indigestion—which, after all, might be due to the proximity to a little private sewer.

Dr. Newcomb said that he had used Dr. Chapin's tongue depressor with much satisfaction. There were many groups of tonsillitis which were pathologically different, though symptomatically closely allied. Some persons learn that their attacks of tonsillitis arise from what they call "biliousness," and promptly relieve themselves by an appropriate purge.

Dr. Chappell approved of the tongue depressor shown, particularly because it was a small one. He did not lay much stress upon the particular shape of the instrument. It was important that the instrument, when introduced, should not touch any part until the base of the tongue has been reached. Among the poorer classes tonsillitis is more common in infancy than among the higher classes—at least that has been his experience. In cases of true follicular tonsillitis in infancy one must be careful that the respiration is not greatly interfered with, and also to prevent, if possible, the formation of that very serious affection in infancy—peritonsillar abscess.

Dr. Simpson asked if it was always possible to differentiate clinically between simple tonsillitis and diphtheria in infancy.

Dr. Emil Mayer asked Dr. Chapin regarding the relative frequency in private practice of these inflammations of the pharynx and tonsil.

Dr. Chapin, in closing the discussion, said that it was much easier to introduce his tongue depressor than a spoon quickly down to the base of the epiglottis, and if this were done, the examination would

usually be satisfactory. Infants' throats usually contain a large number of germs, and when there is acid fermentation the condition is rendered favorable for germ infection. In the same way, the exposure to cold favors such infection, and hence both these factors should be looked upon as practically causes of tonsillitis. In his experience, tonsillitis is very common in dispensary, and comparatively rare in private practice. As Dr. Koplik had said, the crypts of an infant's tonsil are exceedingly small, and hence, in follicular inflammation of the tonsil in such subjects the points are exceedingly minute, though still plainly visible in a good light. The differentiation between tonsillitis and diphtheria could only be made, in some cases, by bacteriological examination.

Intubation in an Adult.

Preparatory to a subsequent report Dr. W. Kelly Simpson presented a male adult, who had been intubated for the purpose of allowing the removal of a tracheotomy tube. His laryngeal symptoms began in October, 1898. On December 15 the dyspnea became very alarming, and, on the following day, tracheotomy was performed. One week later, when intubated, it was found still impossible for him to breathe without the tube. Examination of the larynx at that time showed the whole interior to be occluded by a more or less dense and irregular induration. He considered cocaine anesthesia preferable to general anesthesia for intubation in adults when practicable, and accordingly cocaine had been employed in this case. When a tracheotomy tube is being worn, owing to the difficulty of raising the larynx, it is more difficult to reach the larynx in order to intubate. It was necessary in this instance to make considerable pressure before the intubation tube could be forced through the stricture and below the margin of the tracheotomy wound. The intubation tube remained *in situ* without difficulty for two days and a half, and then, after a severe coughing spell, it was expelled. It had not been necessary to wear any tube since that time. The man was placed on iodide, and now the larynx presents a nearly normal appearance. A very large-sized hard rubber tube was used.

Syphilitic Necrosis of Wall of Antrum.

Dr. Thomas J. Harris exhibited a woman of middle age who had suffered from syphilis for about three years. She had been first seen by him last summer at the Post-Graduate School. Examination showed considerable denuded bone in the nose. Under ether the antrum was opened, and disease of that cavity discovered. Curettage and drainage failed to give the desired relief, and it was then

decided that the denuded bone in the nose was really a sequestrum. This sequestrum was removed, and at the present time almost the entire inner wall of the antrum is absent, but the patient has been completely relieved.

Bony Cyst of Middle Turbinate.

Dr. Francis J. Quinlan said that he had recently removed the anterior part of the middle turbinate body, which had undergone cystic degeneration of the bone. After extirpation of this portion a true fibro-myxoma was discovered behind the first mass.

The Treatment of Dysphagia and Cough, Especially in Tuberculosis.

Dr. Wolff Freudenthal read a paper with this title. He said that for the past eight years he had made use of curettage in the treatment of dysphagia, and was able to report upon twenty-nine cases having complete records. Eighteen of these were not improved: in seven there was no immediate amelioration; in four the improvement was almost immediate. Of the eighteen unimproved, thirteen were in an advanced stage of tuberculosis, and the remainder were in an earlier stage of this disease. The operation actually appeared to aggravate these cases. He did not yet feel that he was able to state accurately the indications for this operation, and hence still regarded such intervention as an experiment.

He had recently made use of a new remedy, called orthoform, a clear, white powder which seemed destined to replace cocaine in a large number of cases. It does not act upon the skin, and only slightly on the intact mucous membrane, but it acts powerfully where there has been loss of substance. It possesses two very valuable properties, viz.: (1) Its analgesic action; and (2) its freedom from toxicity. It had been given in doses of two to twenty-five grains daily without any bad effect. He had at first used the powder in full strength, and had noticed that the best results were obtained on spots where the powder was longest retained. By its application pain is relieved for a period varying from a few hours to a few days, so that the patient can take nourishment readily, and is relieved not only of the physical, but also of the mental depression associated with painful deglutition. It had been recommended to use this remedy in 25 per cent strength in conjunction with olive oil, but the orthoform subsides so rapidly that such a mixture is very unreliable. It is much better to use an emulsion made with yolk of egg. It may also be used in powder form mixed with stearate of zinc.

Dr. Freudenthal had also employed heroin, a white, crystalline powder, which dissolves readily in alcohol. It is best administered in tablets or powder. It possesses certain advantages over opium and morphine, such as freedom from nausea and vomiting. The relief of the cough of phthysical patients was of the utmost importance, and in this field he believed heroin would occupy a prominent place. It is effective in small doses, and may be given for long periods without detriment to the health.

Regarding PHOTO-THERAPY, or the use of light for such therapeutic purposes as those under consideration, Dr. Freudenthal said that his attention had been specially directed to this field incidentally in connection with results observed during his study of transillumination. But it was not until 1891 that he had attached much importance to these observations, and then only as a result of the investigations of others concerning the effect of the electric light on bacteria. The treatment is agreeable to the patient and free from injurious effects, and the results so far obtained are sufficiently encouraging to justify its more extended trial.

(The discussion of this paper was postponed until the next meeting.)

Western Ophthalmologic and Oto-Laryngologic Association.

The fourth annual meeting of the Western Ophthalmologic and Oto-Laryngologic Association was held in New Orleans Feb. 10th and 11th. A selected programme of interesting papers was successfully carried out. As the meeting occurred at the time of the Mardi Gras festivities the sojourn of the members was thus made doubly entertaining, and a unanimous vote of thanks was accorded to the local committee of arrangements for their active attention.

The officers elected for the ensuing year are:

Dr. W. Scheppegrell, New Orleans, President.

Dr. M. A. Goldstein, St. Louis, 1st Vice-President.

Dr. H. V. Würdemann, Milwaukee, 2d Vice-President.

Dr. E. C. Ellett, Memphis, 3d Vice-President.

Dr. F. C. Ewing, St. Louis, Secretary.

Dr. W. L. Dayton, Lincoln, Neb., Treasurer.

The fifth annual meeting will take place April, 1900, in St. Louis.

ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

Acute Rhinitis—WADSWORTH WARREN. Detroit—*Med. Age*—January 10, 1899.

Each individual has some locality of less resistance. Sudden exposure to moderately low temperature of the part results in a cold.

Bacteriologically, the results are negative, as to the finding of a specific germ.

Clinically there are three stages:

1. A prodromal stage.
2. Congestion without secretion.
3. The stage of hypersecretion.

The hygienic prophylaxis is of first importance in the treatment. To increase the lessened power of resistance by the wearing of proper clothing, by suitable bathing and exercise. Obstructive lesions of the nostrils should be corrected.

For the attack we aim to restore the equilibrium of heat production, by employing diaphoretic, diuretic and cathartic remedies. Hot drinks and hot foot baths. The use of quinine is to be discouraged. Locally, a weak Dobell's solution, followed by a mild astringent. Slight cauterization, with chromic acid bead on lower border of inferior turbinated, is often of great benefit. A powder, to be used by the patient, as follows is recommended:

R Cocaine.
Zinc oleate.
Soda bicarbaa. gr. v
Amyliq. s. ad \mathfrak{z} iv

[Cauterization in acute cases can less often be of benefit than an aggravation. The use of cocaine, in the hands of the patient, should be discouraged as harmful.—REP.]

STEIN. (BISHOP.)

Cartilaginous Tumors of the Nasal Fossæ—SICARD DE PLAULOZES—*Revue Int. de Rhin., Etc.*, November, 1898.

These tumors are rare and but little known, the author having succeeded in collecting only twenty-six cases. It is an affection of adolescence and of youth, being more frequent in the male sex. From an anatomic pathological point of view, true chondromata and mixed tumors are found (sarco-chondromata, mixo-chondromata, mixo-sarco-chondromata). The tumor is more malignant in proportion as its elements belong more to the embryonic state. It may easily become malignant and be transformed into sarcoma.

It may occupy the nasal fossa originally, or may invade it secondarily, and develops usually from the cartilaginous septum, occasionally from the site or the bridge of the nose. The period of development is characterized by headaches and neuralgia. There are never spontaneous hemorrhages.

In the second period, there is difficulty of respiration, alteration of the voice and of the sense of smell, aural symptoms occasionally developing. The existence of a gray, hard, elastic and immovable tumor may now be demonstrated. The base of the tumor is large and never pediculated, differing in this from the polyp. The mucous membrane is red, not ulcerated and not bleeding.

In the third period, the enchondroma begins to displace neighboring organs, perforating the month, deforming the face and producing grave functional disturbances, sometimes death. It may perforate the cribriform plate of the ethmoid and reach the brain.

The fourth period is characterized by violent neuralgia, due to compression of the nerves, respiratory and alimentary difficulties, which is followed by a cachectic condition, which may result in death either directly or through cerebral or respiratory complications.

The progress of the enchondroma is usually short, although these tumors do not present the true attributes of malignancy, and the prognosis is grave. The natural evolution produces grave lesions and may result in death. Recurrences are frequent as well in the true as in the mixed form. The former, however, does not recur if the extirpation is complete, but the mixed form has a disposition to recur even after the most extensive operation. The surgical treatment alone is ineffective, and intervention should be made early and complete. Insufficient operation and cauterization are simply a loss of time.

SCHIEPPEGRELL.

A New Method of Extracting Foreign Bodies from the Nasal Fossæ in Children—FLEAZEL *Journal des Praticiens*, November, 1898.

A current of warm salt water at a moderate pressure is injected into the unaffected nostril, and, passing by way of the posterior nares to the occluded nostril, forces the foreign body out or at least allows of its being seized with forceps.

[This method is not new and should be used with caution on account of the danger of forcing the water into the Eustachian tube.]

SCHIEPPEGRELL.

Pemphigus of the Mucous Membrane of the Nose, Mouth, Pharynx and Larynx without Invasion of the Skin MENZEL—*Wiener Klin. Wochenschr.*, Dec. 8, 1898.

At a meeting of the Vienna Medical Club, on Nov. 16, Dr. Menzel exhibited a case of pemphigus involving the mucous membranes of the upper air passages. The case was especially noteworthy from the fact that frequently recurring attacks had brought

about a cicatricial condition of the aditus ad laryngem. The order of occurrence was as follows: First, there appeared vesicles which burst within a few hours of their formation. The epithelium was then thrown off. Upon these denuded spots appeared white, sharply defined deposits which the author by careful histological examination proved to consist exclusively of fibrin with mono and polynucleated leucocytes buried in its meshes; therefore, true exudative membranes. In the case exhibited there was a delicate white deposit over most of the nasal mucous membrane. The hard palate showed two infected spots. Quite a large spot was situated on the posterior surface of the posterior laryngeal wall. Pieces of the deposit were repeatedly removed from this locality for examination; but were always reproduced within a few hours.

One remarkable point in regard to pemphigus of the mucous membrane is that the eruption does not spread to all parts of the surface but seems to occur and re-occur in certain limited areas.

From the fact that the primary vesicles burst so soon after their formation, it is often very difficult to get an opportunity to see them. This has led to the view expressed by Mandelstamm, Heryng and Polotebnoff, that there are two forms of pemphigus, one with, and one without the precedent vesicular eruption. For reasons shown above, the author considers this view to be erroneous.

VITUM. (GOLDSTEIN.)

This Year's Experience with the Treatment of Hay Fever for Stay-at-Homes—W. CHEATHAM—*Louisville Med. Monthly*, October, 1898.

In addition to constitutional treatment, an application of a 25 per cent solution of chromic acid is made to the lower half of the middle turbinals, all of the inferior turbinals and the corresponding part of each side of the septum. Syrup of hypophosphites, or a pill of zinc phosphide and extract nux vomica, is given internally.

[Such an extensive application of a solution of chromic acid should be used with great caution. The present tendency is for more conservative methods in the treatment of this disease.—W. S.]

SCHEPPEGRELL.

The Prevention of Hay Fever—RIXA—*Jour. of the Am. Med. Assn.*, January 21, 1899.

The prevention of hay fever is the title of a paper by Alexander Rixa in the *Journal of the American Medical Association* for January 21, 1899. He calls attention to Strangway's experiments which demonstrate that pollen does not float above the altitude of 1,000 feet, at which point it is in the proportion of one pollen to fifteen or twenty billion parts of air, and only one grain of pollen to every thirty respirations.

The essayist and several other hay-fever sufferers experimented by inhaling the pollen of the ragweed, hogweed, Roman worm-

wood (*Ambrosia artemisefolia*). They had the "gratifying" result of suffering from attacks of hay fever induced by these inhalations. Hence, Rixa, in common with others, concludes that the nostrils must be sterilized against this irritant in order to prevent attacks. He believes, apparently, that the suffering is produced by the development of some toxin from the pollen after it lodges in the nasal secretions.

This treatment consists of irrigating the nasal fossæ, beginning two weeks before the commencement of the season of suffering. For a sterilizing solution he uses one ounce of hydrozone to twelve ounces of water, at first, increasing this to double and treble the first strength, according to the severity of the symptoms. The douche is used tepid or cold four times a day. Between these douches he uses a spray of hydrozone, 33 per cent with glycerin or water, 67 per cent. In very intense attacks he resorts to the following formula:

R Acidi borici gr. xx
 Mentholi gr. iv
 Glycethymolini ʒii
 Solutionis eucaine (beta 4%), q. s. ad ʒii
Misce. Signa: Use in atomizer.

[Our experience with glycethymolin as a naso-pharyngeal detergent corroborates the essayist's evidence of its excellent sterilizing properties. Its alkaline reaction commends it for its solvent action on the adherent secretions, and for its agreeableness to patients. Moreover, it is not a secret remedy, and the publication of its ingredients is in its favor in more than one particular.] BISHOP.

Report of Cases of Asthma due to Intranasal Pressure L. M.

CRICHTON—*Atlanta Med. and Surg. Jour.*, December, 1898.

A clinical history of four cases. The pathologic conditions found were hypertrophy of the middle and inferior turbinated bodies and cartilaginous thickenings of the septum, the removal of which resulted in cures. SCHEPPEGRELL.

II. MOUTH AND NASO-PHARYNX.

Fibro-Mucous Polypi of the Naso-Pharynx—LACONNET—*Revue Hebdomadaire de Laryngol., etc.*, Sept. 3, 1898.

A patient, a man of fifty years, had a voluminous fibro-mucous polypus, one prolongation of which obstructed the right nasal fossa, and a second was so large that it depressed the velum palati and appeared at the isthmus of the pharynx. The buccal prolongation was first removed by the galvanic snare, and the remainder was extirpated through the anterior nasal fossa. Hemorrhage was abundant, but was promptly arrested. SCHEPPEGRELL.

Syphilitic Sore Throat—J. S. MOREMAN—*Charlotte Med. Jour.*, January, 1899.

It is said that one-third of the civilized world have either inherited or acquired syphilis. The author thinks that such a proportion is too large, though this disease is more prevalent than most people imagine.

Syphilis in the throat is often seen from the primary lesion to late in the third stage, even twenty years or more after the initial lesion. Next to the genito-urinary organs the tonsil is the location of the chancre frequently acquired by the promiscuous use of the drinking vessels, pipes, etc.

A very small ulcer of the pharynx will cause the entire parts to be very painful. A deep, angry red appearance is characteristic. The ulcer or patch has a punched out appearance with indurated edges.

The local treatment is to keep the parts as clean as possible. Applications of strong solutions of silver nitrate, bichloride of mercury, carbolic acid and other antiseptics are useful. Internal medication must never be omitted, and must be kept up for some time, even if the throat lesions have disappeared. Precautions must be observed where ulcers exist on the posterior surface of the soft-palate, as adhesions are apt to form with the pharyngeal wall, and such complications are exceedingly difficult to overcome.

In the tertiary stage mucous patches frequently appear. Local applications with the internal administration of potassium iodide is here indicated.

LEIDERMAN.

Nevus of the Pharynx—OPPENHEIMER—*Deutsche Med. Wochenschr.*, Dec. 22, 1898.

At a meeting of the Medical Society of Lower Alsace in Strassburg, Dr. Oppenheimer showed a case of nevus of the whole left side of the face, neck, and as far down as the middle of the sternum. There was also a nevus of the whole left side of the pharynx. This was strictly unilateral and involved the left half of the soft palate, the left palatine arch including the tonsil, the ligamentum pharyngo-epiglotticum, and the left half of the epiglottis. The larynx was not affected.

VITTM. (GOLDSTEIN.)

Prolonged Painful Dysphagia of the Back of the Throat as a Diagnostic Symptom of the three Periods of Syphilis—GAREL—*Scm. Med.*, July, 1898.

Every patient who suffers for more than three weeks without interruption from pain in the back of the throat should be considered syphilitic. Among the affections other than syphilis which give rise to dysphagia of long duration may be mentioned calculus of the tonsil, chronic encysted abscess of the tonsil, acute miliary tuberculosis of Isambert and cancerous tumors, but all these lesions are exceptional and of insignificant frequency compared to syphilitic complications.

SCHEPPEGRELL.

A Case of Encysted Chronic Abscess of the Right Tonsil without Fistula—Opening by Means of Galvano-Cautery—Cure without Relapse—SARGNOL—*Lyon Med.*, July, 1898.

The title gives the substance of the article. A bacteriologic examination demonstrated the presence of numerous staphylococci and streptococci. The contents of the cyst was composed of epithelial debris and mucus. SCHLITTEGRIFF.

On the Existence and Significance of Chronic Tonsillar Abscess—TRITTEL—*Deutsche Med. Wochenschr.*, Dec. 1, 1898.

In this paper the author simply confirms the views set forth by Jessen (*Münchener Med. Wochenschr.*, 1898, No. 23), that the tonsils may be the seat of chronic abscess, and may thereby become a source of serious danger to their host, inasmuch as they may lead to general pyemia or to direct infection through the cervical tissues down as far as the pleural and mediastinal cavities. Several cases are cited to show both forms of infection.

In conclusion, the author urges that better care should be taken of the tonsils. Where the lacunæ have a narrow orifice they should be split open and antiseptic gargles used, or they should be cankerized. Inasmuch as the tonsils are often infected from the nose, the diseases of the latter should have attention, especially all purulent affections. The care of the teeth should not be overlooked. VITTHUM, (GOLDSTEIN.)

Adenoma of the Soft Palate—W. L. BULLARD—*N. Y. Med. Jour.*, December 10, 1898.

The growth was the size of a guinea egg and had been developing for two years in a married mulattress of twenty-three years. Dyspnea was so great that sleep was almost impossible. There was no glandular involvement. The tumor was enucleated, the wound healing in a few days. There was no recurrence. SCHLITTEGRIFF.

Mouth-Breathing—J. J. BOWEN, Brooklyn—*Brooklyn Med. Jour.*, January, 1899.

Post-nasal vegetations are the most frequent factors in producing this condition in children. In adults, nasal polypi, deviations and deformities of the septum, exostoses and tumors give rise to this symptom. Foreign bodies have caused this state in the young for some time, until the exciting cause was removed.

Hypertrophied faucial tonsils also act as obstructions to nasal breathing, and so cause oral respiration.

Convulsions in children are not rare in children who are mouth-breathers. The tongue cleaves to the roof of the mouth, and after a rapid cyanosis a convulsion results, sometimes ending in a fatal attack of laryngismus stridulous. In these cases of nasal obstruction, the voice is noticeably changed. The sense of hearing is frequently involved in such patients. Prompt surgical treatment is necessary whenever the obstruction is found. LEDERMAN.

Unusual Size of Adenoids—ENGELMANN—*Deutsche Med. Wochenschr.*, Jan. 5, 1899.

At a meeting of the Association of the Physicians of Hamburg, held Oct. 4, 1898, Dr. Engelmann exhibited a case where the adenoids projected below the palate on each side of the uvula. Aside from the enormous size of the growth, the case presented nothing peculiar.

VITTM. (GOLDSTEIN.)

A Case of Pharyngo-Laryngeal Spasm with Paresis, Simulating Vomiting—NOGUÉS AND SIROL—*Revue Hebdomadaire de Laryngol., etc.*, Sept. 3, 1898.

The patient, a woman of thirty-seven years, could not support the least pressure in front of neck, even from clothing, without developing symptoms suggestive of the first stage of vomiting. The phenomena disappeared at once when the pressure was removed. The case was cured by the application of the galvanic current. The authors believe it to be a reflex phenomena and not a hysteric manifestation.

SCHEPPEGRELL.

Acquired Tongue-Tie—ARTHUR POWELL—*British Med. Jour.*, Dec. 24, 1898.

A Bengali lad, aged eight, suffered three years ago from ulcerated stomatitis, probably of aphthous or scorbutic origin. The teeth fell out on the right side, allowing the ulcerated surfaces of the lower lip and tongue on that side to come in contact; they united along the line of contact and now nearly half the lower lip from the right angle to opposite the right central incisor tooth is firmly united to the margin of the tongue for a corresponding distance, involving its whole thickness. The rarity of this deformity is explained by the intervention of the teeth and the necessity of movements of tongue and lips when taking food.

FOXCROFT.

Tuberculosis of the Tonsil—SEYMOUR OPPENHEIMER, New York City—*Med. Age*, January 10, 1899.

This disease is divided into two classes—primary and secondary. The primary form is very rare. The infection may occur from unclean instruments, from inhalation of air containing tubercle bacilli or from ingestion of tuberculous food. Inspection, as a rule, reveals nothing in particular. They may appear normal or hypertrophied. Microscopical examination will disclose the tubercle bacilli, usually associated with giant cells and tubercles; at times caseation. The treatment in the primary form, if confined to the tonsil alone is simple, by removing it.

The secondary form is of frequent occurrence. On examination we find hypertrophy with no other lesions, or ulceration may be present. The ulcers are superficial, uneven or ovoid, with red base and pale at their circumference. The mucous membrane of neighboring parts are markedly anemic. The pain is usually in-

tense, often so as to necessitate feeding by rectum. In advanced or extensive cases the voice is often impaired and its use painful. These symptoms, with emaciation, a hectic fever and pulmonary changes, clears the diagnosis. Lupus, cancer and syphilis are to be considered in the diagnosis.

In the treatment, counteract the general tuberculous tendencies, functional rest to parts and topical applications for pain and healing of ulcerations, etc. STEIN. Bishop.

III. ACCESSORY SINUSES.

The Diagnosis of Suppuration in the Accessory Cavities of the Nose—WM. LAMB—*Birmingham Med. Review*, December, 1898.

The usual suggestive symptoms are enumerated, head-ache, neuralgia, etc., optic neuritis and shrinking of the visual field has been noticed by Berger and Tyrmann in sphenoidal empyema. The differential diagnosis between closed empyemata when the discharge is retained and open empyemata when the discharge is free, is discussed.

For diagnostic purposes the cavities are divided into two groups, anterior, viz: antrum, frontal sinus and anterior ethmoidal cells, all of which drain into the middle meatus of the nose, and posterior viz: posterior ethmoidal cells and sphenoidal cavity which drain into the superior meatus, therefore, the situation of the pus in the nasal cavity must be located to ascertain which group is affected, then each cavity in that group examined in turn, beginning with the one most frequently affected.

Various methods of examination are described, such as transillumination, insertion of probe and washing out the cavities through their natural openings or artificial ones, etc. FOX-CROFT.

A Case of Disease of the Antrum and the Frontal and Ethmoidal Sinuses—J. W. FARLOW—*N. Y. Med. Jour.*, Dec. 17, 1898.

A man of twenty-seven years had a severe attack of scarlatina which left a swelling in the corner of the left eye. When seen ten years later, there was considerable deformity, the left eye projecting forward beyond the bridge of the nose, and the condition was rapidly becoming worse. There was no history of a nasal discharge at any time.

The anterior end of the middle turbinal was removed by means of the cold snare, which was followed by the discharge of three or four ounces of a clear but tenacious fluid. The case made a complete recovery. SCHEPPEGRELL.

On the Operation for Empyema of the Frontal Sinus—BARTH, of Danzig—*Archiv für Klinische Chirurgie*, Heft 4, 1898.

In an able paper on the above subject, the author proposes a modification of the existing methods of operating. He rightly states that the old plan of trephining the sinus was followed by

hideous deformity, was very slow in healing and often left fistulæ which refused to heal under any treatment. The newer operations of Czerny and Kuster where drainage into the nose is provided for, do certainly obviate most of the disadvantages of the older methods, but even here the healing is not rapid, and the thin drainage tube, passed through an artificial opening into the nose, easily becomes obstructed, thus compelling the operator to depend on drainage and irrigation through the external wound. The principle laid down by Kuster that a suppuration occurring in any cavity enclosed by rigid walls must be drained from the lowest point, applies particularly to empyema of the sinus in question, for the primary cause of an empyema in this situation is a malposition of the natural outlet.

Following this line of thought, the author proposes to open the sinus at a point corresponding with its natural outlet into the nose. His method is described as follows: An incision $2\frac{1}{2}$ ctm. in length is made alongside the root of the nose. Through this opening he chisels through the nasal bone and the nasal process of the frontal bone. By retracting the edges of the wound, sufficient space is given for making a small flap of bone and periosteum which is pried to one side by the chisel used as a lever. The mucous lining of the sinus now bulges into the upper part of the wound. After this is opened and its purulent contents allowed to escape, the sinus is temporarily plugged with gauze, while with scissors, forceps and chisel the upper part of the nasal cavity is cleared out until there is a broad and roomy communication between the sinus and the nose. After curetting the sinus, a drain should be introduced from the nasal cavity, the flap of bone and periosteum replaced and the soft parts closed by suture.

The whole operation is said by the author to be perfectly easy and practical. A distinct advantage of this method is that any complication in the ethmoid cells cannot be overlooked, for they lie directly in the field of vision. Still another advantage lies in the fact that one cannot fail of opening the sinus whose lateral extent we know varies so greatly in different individuals.

The author reports two cases operated on by this method.

VITUM. (GOLDSTEIN.)

Retromaxillary Growths—CARL BECK—*Journal of the American Medical Association*, January 14th, 1899.

The results of operations on sarcomata and carcinomata of the naso-pharyngeal space are so unsatisfactory, with an operative mortality of 30 per centum, and only a small number remaining free from recurrence after the third year. The operations for these growths are not considered advisable (Butler). It is different, however, with polypi, the removal of which results in a cure.

The difficulties besetting the operation in this remote cavity are patent, and unless all of the polypus is removed, recurrence and malignant degeneration may occur (Koenig). Others claim that remnants of considerable size atrophy and disappear (Lafont-

Gosselin). Beck's experience shows that in case of multiple fibromata small parts are likely to be overlooked and to attain to enormous proportions when room has been made for them.

Objections are urged against removal by snare on account of its tendency to break and cause hemorrhage, sloughing and aspiration of septic materials into the lungs, resulting in pneumonia and gangrene of the lungs. Electrolysis is not favored on account of the large number of painful treatments necessary—forty or fifty—and the uncertainty of ever radically getting rid of the tumor. Stress is laid on the dangers from hemorrhage in breach and flap operations, from loss of blood, from aspiration of blood into the lungs and from subsequent anemia. In these operations tracheotomy may be performed and the larynx may be tamponed. Beck prefers ligation of the carotid artery. Although it may not be sufficient to completely prevent hemorrhage, it has proved successful in his hands.

The method of Ferguson or Liston is preferred, beginning by ligating the carotid artery. Then an osteoplastic resection of the upper jaw is made. An incision is made, beginning at the tragus, crossing the face in a line underneath the eye, passing alongside the nose around the wing of the nose to the middle of the upper lip, splitting this upper lip and the soft parts of the palate right through, chiseling the bone on the malar, naso-frontal and middle palatal lines, prying the bone at its junction, and thus the whole tumor is made accessible. It may now be removed with its processes and anatomically prepared, all the hemorrhage stopped, the different parts replaced and sutured—only the two incisors being wired—otherwise only the soft parts are united, but in the most exact manner. Particular attention must be paid to this adaptation, inasmuch as primary union insures a good function of the parts replaced and causes the least disfigurement.

An unfortunate incident of several operations was an ulceration of the cornea, produced, probably, by pressure from the dressing. To prevent this accident it is recommended to suture the eyelids, or to glue them together with collodion before operating. The article is accompanied by an illustration showing the result of an operation on a child of ten years at the Post-Graduate Hospital. After two years the good results persist, and the child is well.

Operations on tumors of a sarcomatous nature are detailed, revealing the patience and ingenious resources of the surgeon in dealing with this desperate class of cases.

BISHOP.

Further Results on the Operative Treatment of Chronic Frontal Sinusitis—J. B. BRYAN—*N. Y. Med. Jour.*, Dec. 17, 1898.

A report of two cases of frontal sinusitis treated by the Bryan modification of the Ogston-Luc operation, both of which resulted in a cure. Instead of the median incision as in the Ogston-Luc operation, which in many instances leaves a visible scar, the incision is made through the eye-brow, in which the resulting scar is completely hidden by the hair. Instead of the drainage tube a

strip of gauze is used, which for the first few days acts as a drain, and after its removal the opening between the nose and the frontal cavity, being of sufficient size, permits free and constant drainage from the sinus into the nose. Care should be taken that all caries of the ethmoid cells are thoroughly eradicated.

SCHEPPEGRELL.

A Case of Disease of the Pneumatic Sinuses—ROBERT SATTLER—

Cincinnati Lancet-Clinic, January 14, 1899.

The case was one of disease of the right maxillary and frontal cavities, with elevation of the floor of the orbit and displacement of eye. Owing to the history, age of patient and the slow growth (three years), a neoplasm was diagnosed. Exploratory operation failed to substantiate this, and instead an extensive bone hypertrophy of the margin, partial sequestration of superior maxillary and frontal bones, with enormous enlargement of both sinuses, which were empty, was found.

STEIN. (BISHOP.)

Diagnosis and Operative Treatment of Tumors of the Lower

Maxilla—E. SOUCHON—*New Orleans Med. and Surg. Jour.*, January, 1899.

Large tumors (three and a half by two and a half and above) require resection of the bone, partial or total, whether the tumors are benign or malignant. Small tumors (one and a half by two and a half and below) are all curable by gouging or enucleation, unless malignant. Uninterrupted anesthesia with the Souchon apparatus for injecting the anesthetizing vapor into the throat by means of tube passed through the nose is advised.

SCHEPPEGRELL.

A New Method of Temporary Resection of the Superior Maxilla—

PARTSCH, of Breslau—*Archiv. für Klinische Chirurgie*, Heft 4, 1898.

The author gives a short review of the more modern operations devised for reaching the naso-pharyngeal vault in the extirpation of tumors, etc. After reciting the disadvantages of the various procedures (hemorrhages, complicated technique, involving prolonged operations, resulting deformities, etc.), he proposes a new operation designed by himself, gives a full description of it and reports a case.

Singularly enough this operation was suggested to him by a case of extensive fracture of the superior maxilla and vomer where the whole alveolar portion of the upper jaw, together with the hard palate, were rendered extremely movable.

The first part of the operation is performed with the patient in a sitting posture, and consists in making an incision through the mucous membrane along the front of the alveolar process from the second molar on one side to the same tooth on the opposite side. The incision is made high up near the line where the mucous membrane is reflected from the alveolar process to the inside of the lip. With an elevator the soft parts are rapidly pushed upward and

downward and the bone laid bare. The nasal cavity is then opened from the wound and the lower part of the nose loosened from its attachments. The soft parts, nose, upper lip, etc., are then strongly drawn upward and a very broad chisel so held as to cut through the bone at a level above the floor of the nasal cavities as well as above the floor of the maxillary sinuses. By this means the anterior and outer walls of each antrum, together with the vomer, are cut through. It is now possible, with moderate force, to depress the whole hard palate and alveolar process, the mass swinging on an axis drawn laterally through the posterior portion of the body of the maxillary bone. This procedure, the author says, lays bare the base of the skull from the sphenoidal sinus to the ethmoid and gives abundant room for all operative manipulations. The position of the patient is now changed. He is laid on the table with the head hanging down from its edge. From this point on, the technique will, of course, vary with the attachment of the tumor, its nature, etc.

The author claims, as the advantages of the operation, comparatively simple technique thus enabling the surgeon to proceed rapidly, only one line of suture in the mucous membrane, and that so situated as to be rapidly and easily completed. No deformity, little hemorrhage as compared with the other operations, and finally ease of replacement and retention of the displaced bone when the operation is complete. VITUM. (GOLDSTEIN.)

Some Clinical Reports—RIPAULT—*Revue Hebdomadaire de Laryngologie*, September 3, 1897.

1. This case refers to the Spontaneous Expulsion of a large Foreign Body from the Maxillary Sinus. The patient suffered from maxillary sinusitis. A perforation was made through the alveolus by means of a No. 15 drill. Some time afterwards an attempt was made to enlarge the opening when the drill disappeared into the cavity and could not be removed. Three weeks later it was discharged spontaneously through the nose, while the antrum was being irrigated.

2. A case of Papillomatous Lupus of the Nasal Fossa in a patient of twenty-eight years. Treatment by curetting was used, which was followed by recovery.

3. A case of Rhinolith in a child of five years.

4. A case of Voluminous Tumor of the Palate, which proved to be a fibro-lipoma weighing 165 grammes. The removal was followed by complete recovery.

5. A case of Hereditary Specific Laryngitis in a man of twenty-seven years. There was chronic stenosis, which was treated by specific medication and progressive dilatation with success.

6. A case of Gumma of the Tongue, in which specific treatment was followed by a cure in three weeks.

7. A case of Polypus of the Region of Shrapnell, with a markedly rapid evolution. The polypus was removed by means of the snare and specific treatment instituted, which resulted in a cure.

8. A case of Voluminous Polypus of the Left Nasal Fossa with cerebral symptoms. The polypus measured 12 cm. and weighed 30 grammes. Its removal was followed by complete disappearance of the cerebral symptoms.

9. A case of Spontaneous Hematoma of the Uvula. The patient was sixty years of age. The tumor was the result of an interstitial hemorrhage.

10. A case of Recurrent Tuberculous Ulceration of the Naso and Oro-Pharynx. General treatment was instituted, and the ulcerations treated by the application of phenic-glycerin, one to ten, which was followed by improvement.

11. A case of Paralysis of the Velum Palati, in which cure followed the application of the electro-cautery.

12. A case of Voluminous Papilloma of the Anterior Right Pillar of the Left Tonsil, which was removed by means of the adenoid cutting forceps.

13. Grave Complications following the Use of Cocaine. The application was made to the pharynx and larynx, and was followed by grave nervous symptoms, which did not disappear for eight days.

SCHEPPEGRELL.

IV. LARYNX AND TRACHEA.

Tuberculous Ulcer in a Tracheal Fistula—B. FRÄNKEL—*Deutsche Med. Wochenschr.*, Jan. 5, 1899.

At a meeting of the Charité physicians in Berlin, held Dec. 1, 1898, Dr. B. Fränkel exhibited a case where on account of dyspnea a tracheotomy had been performed. Although the canula had been removed for sixteen weeks the tracheal fistula showed no tendency to heal. Moreover it was the seat of a tuberculous ulceration. This unusual condition, however, proves that the sputum from the lungs is capable of infecting wounds. The case also brings up the question as to whether tracheotomy should be done in tubercular laryngitis, as was proposed by Moritz Schmidt.

VITTUM. (GOLDSTEIN.)

A Contribution to the Study of Sarcoma of the Larynx—J. GRANET—*Revue Int. de Rhin., Etc.*, November, 1898.

From a study of sixty cases the author submits the following:

Sarcoma of the larynx is much more rare than epithelial tumors of this organ. Its etiology is as obscure as that of sarcoma in general, and it has been found at all ages, even in children. Like epithelial tumors, it is much more frequent in males than females.

The symptomatology is made first from the symptoms common to other malignant tumors of the larynx, and second, from special symptoms such as the rapid progress, the enormous development, and the absence of adenopathy. The majority of cases observed are very dissimilar and do not permit of a general description. Two clearly defined types, however, exist: First, the infiltrative

form, characterized by extra-laryngeal encroachment, its eccentric progress, invading neighboring organs, and the absence or slowness of ulceration of the sides of the laryngeal cavity; second, the vegetating form, characterized by the formation of enormous intralaryngeal polypi.

All the histologic varieties have been observed in the larynx (embryonic, sarco-fasciculated, etc.). The prognosis, always grave, is especially so in the latter form.

In regard to treatment, the author prefers the endo-laryngeal ablation when the tumor is quite limited and may be thoroughly extirpated by this method. Laryngotomy is preferred when the extension is very considerable; tracheotomy, especially crico-tracheotomy, is preferred when the treatment is symptomatic and palliative.

SCHIEFFELT.

Edema of the Larynx due to the Menopause—V. UCHERMANN.

Christiana—*The Med. Bulletin*, Jan. 8, 1899.

This condition was observed in a woman, fifty-three years of age. Symptoms of embarrassed respiration and dysphagia were present.

An edematous swelling of the left aryteno-epiglottidean fold was seen. This was incised and respiration became more easy. Considerable swelling of the adenoid tissue at the base of the tongue also existed. At this time the menopause suddenly occurred and occasioned, from time to time, a congestion of the tongue. Leeches were applied and sodium salicylate and sodium iodide were given internally. The swelling gradually diminished.

The day on which the patient should have seen her menses she was conscious of an afflux of blood to the nose and face, with palpitation of the heart.

After several months there remained but a small gelatinous tumor, situated on the summit of the arytenoid cartilage. This growth finally disappeared but returned at the time of each catamenial epoch. Examination of the sputum was negative. The urine was normal. The author considered the swelling to be a form of angioneurotic edema.

LEDERMAN.

Stenosis of the Larynx—M. BOUTET—*L'Union Médicale du Canada*, Vol. iii, No. 11.

The patient, a woman of forty-eight years with a syphilitic history, complained of repeated suffocative attacks, and was seized with one in the presence of the surgeon, who at once performed tracheotomy, but no air entered by the canula. The spasm was presently relieved. The patient was put under constitutional treatment—calomel injections and large doses of the iodides. This, as well as further operative measures, intubation and tracheotomy, failed to save her life.

Post-mortem.—The epiglottis was entirely destroyed, the larynx stenosed, but patent, the glands were not materially enlarged.

The spasm was attributed rather to the entrance of particles of food into the unprotected larynx than to mere involvement.

GIBB WISHART.

Lupus of the Larynx—MASSEI, Naples—*Jour. L. R. O.*, January, 1899.

Microscopical sections and drawings from a case of the author's were shown before the Laryngological Society of London.

The patient was a girl of ten, who was suffering from typical lupus of the larynx. The case had been diagnosed as syphilitic from the skin lesions by a competent dermatologist. But in spite of energetic anti-syphilitic treatment the affection got worse. Sections of tissue removed showed giant cells and epithelioid cells, characteristic of tubercle. Recently symptoms of pulmonary disease developed.

In the discussion which followed, Sir Felix Semon said that it was generally agreed that lupus and tubercle were essentially the same, but that the former was characterized by its chronic cause, and the paucity of tubercle bacilli. LEDERMAN.

V. EAR.

The Relation of Certain Diseases of the Ear to General Pathological Conditions—HEERMAN—*Deutsche Med. Wochenschr.*, Dec. 8, 1898.

The author wishes to emphasize the influence which general pathological conditions may exercise over middle ear affections. He cites several cases where attention to a general arterio-sclerosis enabled him to obtain results in chronic ear catarrh which had resisted local treatment for years. VITTUM. (GOLDSTEIN.)

Inflammatory Diseases of the Middle Ear—ANDREWS—*Medical Standard*, December, 1898.

In the *Medical Standard* for December, 1898, Albert H. Andrews gives some of the results of his studies of inflammatory diseases of the middle ear in the Post-Graduate clinic in Chicago. He says: "Most of the ear diseases which are seen in this clinic are either sequela of, or associated with, some naso-pharyngeal disturbance." The practice of taking the temperature of all new cases when they are admitted to the clinic shows that more than 75 per centum of all patients with chronic suppuration of the middle ear have from 1° to 2½° of temperature above the normal.

For suppurating ears, after cleansing and inflation according to the classic methods, the external auditory canals are packed to the drum head with iodoform gauze cut into strips one-half inch wide and nine inches long. This protects the ear, assures the constant action of iodoform and promotes drainage by capillary attraction. When granulations are present, the gauze is packed firmly down upon the granulations so as to produce as much pressure as possible for the purpose of encouraging the process of absorption. The packing should be renewed as frequently as it becomes saturated with the discharge. BISHOP.

The Relation between Diseases of the Ear and those of the Eye—LAURENS—*Revue Int. de Rhin., Etc.*, November, 1898.

From a study of fifty-three cases and an extensive bibliography, the author offers the following conclusions:

There exists between the organ of hearing and that of vision certain anatomic physiologic relation which explains the pathologic reaction of the ear upon the eye, and inversely. The anatomic relations are established first through the brain (otic suppuration producing cerebral abscess causing optic neuritis); second, by the trigeminus and the anastomosis of this nerve with the facial, so that, for instance, the syringing of the auricular canal may produce blephorospasms by the excitation of the auriculo-temporal nerve, branch of the trigeminus which anastomosis with the facial; through the connections with the oculo-motor ganglions (ocular affections developing in the course of diseases of the ear without cerebral complications).

The physiologic relations are explained first by the function of the trigeminus shown by experimental researches and by the physiology of the semicircular canals.

The ocular disturbances observed in diseases of the ear are very numerous, the most frequent being nystagmus and optic neuritis. Ocular complications are not constant, but when they exist are of capital importance for diagnosis and for surgical intervention when the necessity of this is demonstrated. SCHLEPPGRIFF.

Care of the Ears in Early Life—D. G. BRYANT, Omaha, Neb., *Gaillard's Med. Jour.*, December, 1898.

The care of the ear in early life means the care of the nasal passages and pharynx, as well as the ears themselves. Beginning with the infant, care should be taken that the nose be clear for breathing purposes before nursing is allowed. Pure air and hygienic surroundings are as necessary for the health of the mucous membrane lining the throat, nose and ears as for the general health. It is absolutely necessary for the preservation of the ears in a normal condition that perfect ventilation and drainage of the nasal passages be maintained, and any new growths, hypertrophies or deformities should be immediately removed. In all diseases of childhood prone to affect the mucous tract extending through the nose, throat and middle ear, the latter should be carefully watched and receive proper attention and treatment as soon as any symptoms of implication of that organ become manifest.

MACLEAN. (BISHOP.)

Measles Complicated with Broncho-Pneumonia and Double Suppurative Otitis Media—TISSOT—*Revue Hebdomadaire de Laryngol., etc.*, September 3, 1897.

The ear affection developed with the symptoms suggestive of meningitis, which were promptly relieved by the paracentesis of the tympanic membrane. SCHEPPEGRIFF.

Suppurative Otitis Media, Complicated by Hyperplasia of the Meatus—F. FAULDER WHITE—*British Med. Jour.*, Dec. 24, 1898.

Patient, a male, aged forty, with a history of previous occasional discharges from ear and something removed from it by a medical man six months previously. The meatus was blocked with a firm growth, composed largely of fibro-cartilage, having no pedicle, but extending along the whole length of posterior wall of meatus, this was removed under chloroform by means of sharp scissors and a bistoury, a quantity of pus being liberated from the middle ear. There was a tendency to recurrence which was arrested by use of the knife and repeated application of nitrate of silver and carbolic acid, the middle ear was syringed out with silica-fluoride solution. In about six weeks the middle ear was dry and clean and though the posterior wall of meatus was slightly thickened there was a good passage. The hyperplastic activity of the tissues seemed to be at an end.

FOXCROFT.

Suppuration of the Middle Ear, Etc.—A. J. MCCONACHIE, Baltimore—*Maryland Med. Jour.*, Jan. 21, 1899.

This condition is most common in childhood, and usually follows the eruptive fevers, influenza, diphtheria and other forms of infectious disease.

Perforations in acute suppuration usually heal after cessation of the discharge; rarely so after chronic processes.

Caries of bone should be suspected when polypi and granulations are present.

LEDERMAN.

Otitis Media, with Triple Personality—A. J. ERWIN, Mansfield, Ohio—*Jour. of the Am. Med. Assn.*, January 7, 1899.

Girl of eight years, during an attack of otitis media began to show peculiar nervous phenomena, such as sudden suspension, apparently, of the respiratory act, and attacks of double and triple consciousness. The three personalities are entirely separate and distinct; each has her own facial expression, language and style. She suddenly drops into a sound sleep for a few seconds and awakens as her second, with a new expression and voice. In an hour or so she again drops asleep, very suddenly, and after a few seconds awakens as another self, with the voice, language and expression of the age she represents. The author cites many similar cases in history. Much has been written relative to such conditions under "Unconscious Cerebration;" "The Subliminal Self;" "Sub-conscious Personality;" and the "Secondary Self."

The author excludes as causes, hysteria, insanity, delirium, hypnotism and somnambulism. He thinks we must give it an independent place among the neuroses, believing it to be an involuntary reversion of consciousness from the normal current to the mental state of an earlier date in the life of the individual. He asks: "Has the ear disease developed a brain lesion, or simply awakened a dormant neurosis?"

STEIN. (BISHOP.)

A Case of Mastoiditis—ALBERT E. BUISON, JR., Fort Wayne, Ind.
—*Jour. of the Am. Med. Assn.*, January 7, 1899.

A man of forty-five years, had an acute otitis media five months prior to being seen. At this time there was a copious discharge, associated with unusual tenderness and pain behind ear affecting entire side of head. A slight chill and temperature, 99.5; mastoid integument edematous and tender. Operation. Antrum uncovered, finding one-half dram of pus, and communication established with middle ear. The cells of the mastoid process were entirely obliterated. Curette freely used. Iodoform gauze packing. End of twelve hours, free from pain, with temperature of 101, increasing to 103° at end of forty-eight hours. Antiseptic irrigation through opening and out of meatus. Daily irrigation up to eighth day when wound was dry, temperature normal and patient feeling well. End of three weeks patient complained of dull, deep-seated pain in mastoid region. Five weeks from time of operation pain still present, chill, rise of temperature, dizziness and nausea. Fistulous opening now discharging foul pus. Diagnosis, sinus thrombosis and probably complicating meningitis. Operation. Extensive caries involving entire tip of mastoid and inner table, upward and backward. Lateral sinus and tempo-sphenoidal lobe exposed. Found reddened and indurated. No pus or clot could be found or felt. For three days following operation temperature ranged between 101 and 103.5. Marked tenderness along line of jugular. Pain over entire left side of head. Dressing was removed and pus was found oozing from temporo-sphenoidal fossa, which was drained by passage of a probe. Final recovery after three months following second operation.

STEIN. (BISHOP.)

Cases of Mastoid Disease—H. WOODS, JR.—*Maryland Med. Jour.*,
Dec. 24, 1898.

The author reports two cases of mastoid disease operated upon successfully. They were instances of dissecting tympano-mastoid abscesses. The antrum was not opened in either case. He believes in the conservative treatment in these cases, and does not think the cells should be opened in every case.

LEDERMAN.

Otitic Pyemia—CARL J. M. SCHMIDT—*Deutsche Med. Wochenschr.*,
Nov. 17, 1898.

Report of eight cases. Three were treated without operation (one death). Five were operated (two deaths). As a result of his experience the author is inclined to think that pyemic cases are not markedly influenced by operation inasmuch as the pyemic foci are apt to be situated in inaccessible portions of the circulatory system. (Bulbus venæ jugularis, etc.) In general he advises the opening and disinfection of the middle ear and the mastoid; but before undertaking more extensive operation it is best to await the special indications presented by each case.

VITTM. (GOLDSTEIN.)

Extra Dural Abscess—MILLIGAN—*Jour. L. R. et O.*, January, 1899.

This form of complication in cases of chronic suppurative disease of the middle ear is not infrequent. This abscess may vary much in size. The most usual site is (1) over the tegumen tympani; (2) in the neighborhood of the sigmoid groove around the lateral sinus. In the latter position they are of a serious nature, as thrombosis of the sinus is readily induced. Large extra dural collections of pus may, however, exist around the sinus without producing thrombosis.

An intermittent pain may be the only symptom present, and it is difficult to make a differential diagnosis in such cases.

Two cases are reported. In the one case a fistula was found in the posterior part of the mastoid, leading to a large extra dural abscess.

LEDERMAN.

Infective Intracranial Complications of Aural Disease, Prognosis and Treatment—ANDREW TIMBERMAN—*Virginia Med. Semi-Monthly*, December 9, 1898.

A careful résumé of the indications for the radical operation in ear diseases, and a plea for early interference whenever the encephalic tissues are involved.

SCHEPPEGRELL.

Hereditary Syphilis as a Cause of Deaf-Mutism—HAHN—*Deutsche Med. Wochenschr.*, Dec. 1, 1898.

In the course of some remarks on hereditary syphilis made at a meeting of the Association of Physicians of Hamburg, Dr. Hahn said that this disease might give rise to deafness either by closure of the Eustachian tube or by directly attacking the middle ear or the auditory center. In the latter case, of course, no lesions could be discovered during life. In case the middle ear is attacked, if no treatment is undertaken, the entire hearing apparatus is dissolved away in pus. In either case the disease begins suddenly, without warning and without pain. Deaf-mutism follows as a natural consequence.

VITTUM. (GOLDSTEIN.)

Diagnosis during Life of Retinal and Labyrinthine Hemorrhage in a Case of Splenic Leukemia—JAMES FINLAYSON—*British Med. Jour.*, Dec. 21, 1898.

Patient, a married woman, aged twenty-nine, was admitted into the Glasgow Western Infirmary five years ago, but the case has only just been published, suffering from splenic leukemia. The greatest point of interest was the implication of the eyes and the internal ear in a case of leukemia and the possibility of diagnosing this during life. A month before admission while crossing from Islay in a steamer she was affected with severe giddiness, noises in the ears came on and she felt sick, the sea was quite calm at the time. An examination of the left eye showed hemorrhages present

in the fundus and this in its turn suggested hemorrhages being present in the nervous structure of the internal ear on both sides. Dr. Thomas Barr examined the ears and the conclusion of his report was "The suddenness of the onset, the extent of the deafness (watch could not be heard on contact on either side and the voice only when spoken loudly near the ears), the presence of giddiness and disturbance of head balance at the beginning, as well as the severe tinnitus, point to exudation in the cavities of the labyrinth, probably hemorrhagic in character."

The post-mortem examination of the internal ear showed hemorrhages in the vestibule and in the first turn of the cochlea, none at all in the middle ear.

FOXCROFT.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

The Bacteriologic Diagnosis of Diphtheria—A. S. ATKINSON—*N. Y. Med. Jour.*, December 10, 1898.

The writer warns against being lulled into a sense of false security by the negative report of the bacteriologist, and cites several cases in which errors were apparently made.

SCHEPPEGRELL.

Infection and Serum Therapy—EDWARD LABERGE—*Canadian Journal of Medicine and Surgery*, Vol. v, No. 1.

The writer concludes an account of the theory of immunization by detailing his experience as physician in charge of the Montreal Civic Hospital for the last three years. During this period 571 cases of diphtheria were admitted, and the diagnosis confirmed by the bacteriological tests. Antitoxin (Roux of Paris) was used in every case. There were 71 deaths, or 13.5 per cent. Of these 31 died within twenty-four hours after admission, leaving 40 who died at a period permitting of a fair test of the power of the serum to effect a cure, or about 7 per cent.

GIBB WISHART.

Whooping Cough and its Local Effects in the Nose, Throat and Ear—HAGEDORN—*Sammlung Zwangloser Abhandlungen aus dem Gebiete der Nasen- Ohren- Mund- und Hals-Krankheiten*, III Band, Heft 2, 1898.

After a sketch of the ordinary course of whooping cough the author enumerates a number of the accidents which may occur to the upper-air passages and the ear. Amongst these may be mentioned hemorrhages from the mucous membrane of the pharynx and trachea, ecchymoses in the lining of the sinus pyriformis in the coverings of the vocal cords and elsewhere in the larynx as well as in the pharynx. Hemorrhages from the ear with perforation of the drum membrane have been noticed. Hemorrhage into the labyrinth is rare, but when it does occur, gives rise to deafness.

During the spasmodic attacks of coughing, the discharge from the naso-pharynx may very easily be forced through the Eustachian

tube into the middle ear, giving rise to middle-ear catarrh of varying intensity. Or it may even cause purulent inflammation, leading to perforation and chronic disease of the ear. Ulcers may often be found on the frænum linguæ or on the tongue itself. They are shallow, with slightly raised edges of a yellowish gray color, and are always caused by contact with the teeth during the spasms of coughing. Ulcers may also occur on the posterior laryngeal wall and the vocal cords. They are small and heal readily as the disease subsides. Laryngeal edema may occur and result in sudden death. After the enumeration of these accidents, the somewhat extensive paper becomes a treatise on whooping cough pure and simple. One point made by the author is worthy of attention. During the early stages of the disease, while the diagnosis is still in doubt, he states that a laryngoscopic examination will often reveal what he has come to regard as a pathognomonic sign of whooping cough. This is a circumscribed area of redness and swelling which occupies the middle of the anterior surface of the posterior laryngeal wall. It is found oftener below than above the cords and extends downward into the trachea.

VITTUM. (GOLDSTEIN.)

Diphtheria and its Local Treatment—A. M. OSNESS—*Virginia Med. Semi-Monthly*, December 9, 1898.

Monosulphide of calcium, three-fourths grain every half hour, is given for a period of thirty-six hours, water being partaken of freely to help elimination of the toxin. Local swabbing with a mixture of acid carbol., tr. ferri perchlor., glycerin and spts. rect. is advised.

SCHEPPEGRELL.

Diphtheria, with Special Reference to the Laryngeal Cases Requiring a Choice between Tracheotomy and Intubation—A. GAUDIER—*Canadian Journal of Medicine and Surgery*, Vol. v, No. 1.

The writer pleads for greater care in the treatment of diphtheritic cases where antitoxic serum is used, especially as regards isolation, local sprays and tonic remedies, on account of the frequency with which other forms of cocci are present, and the danger of too great confidence in the use of the serum. Speaking from the standpoint of the general practitioner, he prefers tracheotomy to intubation, as the number of cases seen is not sufficient to render the physician expert in the use of the intubation instruments.

GIBB WISHART.

Antidiphtheritic Serum in Ozena—F. CATHELIN—*L'Echo Méd. du Nord*, Nov. 13, 1898.

Injectons of five centimeters were made three times per week for three months, cleansing washes being used in the meanwhile. Later, the dose was changed to ten centimeters once weekly. After seven months treatment the patient was apparently cured.

SCHEPPEGRELL.

VII. INSTRUMENTS AND THERAPY.

A Powder-Blower which can be Sterilized —EMIL AMBERG, Detroit—*The Physician and Surgeon*, Feb., 1899.

The powder-blower illustrated by the accompanying figures is of metal, and the tube connecting the powder-blower with the tube of the air-supplying apparatus is of "durit."

"Durit" can be boiled without any damage. Thus the powder-blower can be rendered aseptic.

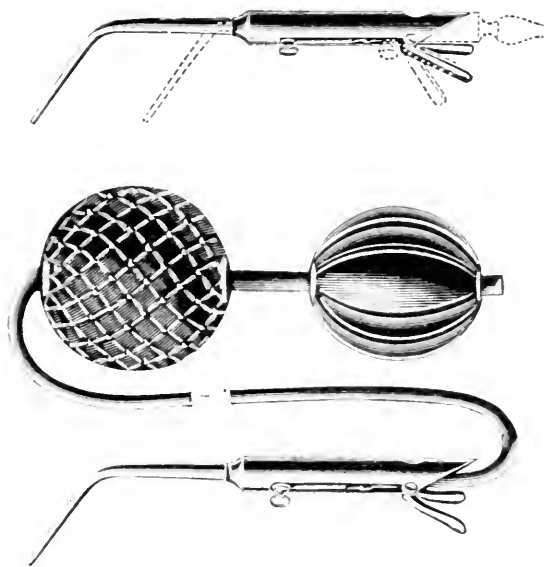
In order to fill the blower, the inner tube has to be brought into the position marked by the dotted lines.

The air can be cut off by pressure on the lever at the base of the instrument.

The tip of the instrument is bent in the form of an obtuse angle in order to be used in treating the ear.

The size and form of the instrument, however, can be changed according to the purpose for which it is needed.

The figures show the instrument in about five-twelfths of its natural size.



A Finger Protector for Handling the Head Mirror—EMIL AMBERG, Detroit—*The Physician and Surgeon*, Jan., 1899.



Whenever a head mirror has to be used during aseptic work a difficulty arises. The mirror cannot be sterilized, and the fingers must not be used to change the position of the same. I advise, for this purpose, a metal finger protector, which is used as a forceps. This instrument is very simple, as is shown by the cut, which represents it in about three-fifths of its natural size.

Manufactured by Tiemann.

The New Treatment of Hemorrhage—*Therapeutic Gazette*, Jan. 16, 1899.

Carnot has recently called attention to the value of hypodermic injections of sterilized gelatin solutions for the purpose of increasing coagulability of the blood in general. He also mentions that the local use of these solutions is exceedingly valuable in controlling capillary or oozing hemorrhage, where compresses fail to produce the results desired, and this substance often suffices when preparations of the iron and the acids fail. When employed as an injection it is absolutely essential that the solution is sterile. The solution used by Carnot is gelatin 12 drachms, chloride of calcium $2\frac{1}{2}$ drachms and water one quart. One or two ounces of this solution is given under the skin into the loose subcutaneous tissues of the back or thighs. It is said to act very speedily in causing coagulation at the bleeding point. When the solution is applied to exposed bleeding points care must be taken after the gelatin is applied to prevent putrefactive changes. This is especially so in cases of nasal wounds. There is some danger with the hypodermic injections of producing hyper-coagulability of the blood. Carnot thinks that when it is necessary to give such injections it is best to give the calcium chloride itself. LEDERMAN.

A New Powder for Acute Coryza—C. F. THEISEN—*The Med. Summary*, January, 1899.

The patient is first advised to wash or spray the nose with a lukewarm alkaline solution (such as Seiler's), so as to rid the chambers of excessive mucus. About three grains of the following combination is then snuffed up into each nostril two or three times daily:

℞ Soda bicarb.,	
Soda biborat.....	aa. gr. xv
Amyli.....	gr. v
Acacia.....	ʒi
Nosophen.....	ʒi
M. S. As a snuff.	q. s. ad. ʒi

LEDERMAN.

A Modification of Laborde's Method for Resuscitation in Deep Asphyxia—W. FREUDENTHAL—*N. Y. Med. Jour.*, Dec. 10, 1898.

Laborde's method, which consists of regular rhythmic traction of the tongue, should not be applied in asphyxia occurring during the latter stage of narcosis. In asphyxia during the earlier stage of narcosis, Laborde's method is probably of some value as an auxiliary to other methods of resuscitation which are more effective.

The author's modification consists in irritating the epiglottis. In the case reported, a tuberculous patient was narcotized for the purpose of opening an abscess which had formed on the outside of the throat, corresponding about to the location of the arytenoid. Just as the incision was made there was simultaneous cessation of

respiration and of the heart action (?). After the usual attempts at resuscitation, the index finger was introduced into the mouth and moved to and fro over the epiglottis. In a short while the patient commenced to swallow and then to breathe. Each time the respiration stopped this procedure was followed by the same result.

SCHEPPEGRELL.

Cocaine Anesthesia—BAGOT—*N. Y. Med. Jour.*, December 10, 1898.

In order to counteract the depressing effect of cocaine on the heart, sparteine is added for its tonic action. The following combination is recommended:

℞ Hydrochloride of cocaine..... gr. $\frac{3}{5}$
Sulphate of sparteine..... gr. $\frac{3}{4}$

SCHEPPEGRELL.

Clinical Notes on Asthma and Its Treatment—BEVERLY ROBINSON—*Therapeutic Gazette*, Jan. 16, 1899.

In an interesting paper upon the above subject the author mentions the reflex causes of asthma.

When morbid conditions are found in the nose or throat, treatment to modify these evidences of disease must be carried out. Local disease, however, is not the sole cause of this distressing affection. Constitutional errors must be corrected. Anemia, constipation, dysmenorrhœa and pronounced neurasthenia may be the exciting factors.

Hypodermic medication with morphine is probably the most serviceable remedy in giving relief during a paroxysm. The danger of the habit must be considered.

LEDERMAN.

The Local Use of the Aqueous Extract of the Suprarenal Glands of the Sheep in the Nose and Throat—H. L. SWAIN—*N. Y. Med. Journal*, Dec. 24, 1898.

The extract is prepared from the dried saccharated glands which are bought in powder form. Ten or twenty grains are added to one-half drachm of cold water, and, after thoroughly stirring, the whole is filtered. The result is a reddish-brown fluid, which is thoroughly unstable and will not keep longer than three days, the signs of decomposition being evident by the formation of a deposit. A small amount of alcohol adds to the durability. The solution should be used alone. The result of Dr. Swain's observations is as follows:

1. We have in the aqueous extract of suprarenal glands a powerful local vasoconstrictor agent and a contractor of erectile tissues, which it is safe to use in very considerable amounts without any dangerous or deleterious effects locally, or to the general constitution of the individual.

2. These local effects can be reproduced in the same individual apparently any number of times without entailing any vicious habit either to the tissue or to the individual.

3. The use of the extract seems to rather heighten the effects which may be expected from any given drug which may be locally used after it.

4. In acute congestions it has its widest application and greatest opportunity for good, but also in certain chronic conditions of the hay-fever type, where edematous tissues seem prone to develop, it can be relied upon as one of the most helpful adjuvants which we have at command. The only difficulty seems to be in producing it in quantities and in preventing decomposition on standing, which objection will be probably easily overcome by laboratory experiment.

SCHEPPEGRELL.

Tribromphenol-Bismuth as an Antiseptic in Chronic Suppurative Otitis Media—L. S. SOMERS—*N. Y. Med. Jour.*, December 24, 1898.

Tribromphenol-bismuth is greenish yellow in color, neutral in reaction, insoluble, and, on account of the high temperature required for its decomposition, can be sterilized without affecting its value. As the drug is slowly decomposed in the ear, it exerts its action for a considerable time, keeping the mucous surfaces under its antiseptic influences for a longer period than any other remedy known to the author. Thorough cleansing of all detritus before the application of the powder is necessary. Under its use epithelial growth is promoted and cicatrization occurs at an early period, while its sedative action allays pruritus and consequently allows of more rapid repair of the tissues.

SCHEPPEGRELL.

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ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

REMARKS ON THE ETIOLOGY OF NASAL POLYPI.

BY JONATHAN WRIGHT, M.D., BROOKLYN, NEW YORK.

About two years ago a girl sixteen years old came to one of my clinics with the history of left-sided nasal obstruction. Her family history was good. She was anemic in appearance although she stated that she was and had always been in good health, having never had any illness of any kind. She was a rather stolid, stupid appearing girl. She had begun to menstruate when fourteen years old, and from the first had always been perfectly regular with no appreciable nervous disturbances. She thought that she first noticed the left nasal obstruction about six months before coming for treatment. Through the right nasal fossa a mass could be seen apparently completely blocking up the choana posteriorly though she could still get some air through that side. The left nostril was blocked with moderate sized polypi, which were subsequently found to be springing from the large one in the posterior part of the nose. This edematous globular mass was seen to almost entirely fill the nasopharynx. The small nasal polypi were gradually removed from the left nostril, but all attempts to encircle the large tumor either through the right or left nostril with the wire loop of a snare were unavailing. Attempts were made to seize the growth with forceps through the nasopharynx, but only small shreds could be removed in this manner.

*Read before the Laryngological Section, New York Academy of Medicine, Feb., 1899.

The patient was finally put under ether and an attempt made to use the snare, but it was again found impossible to do so because the growth so completely filled the nostril. It was found that by forcible manipulation with the finger in the naso-pharynx portions of the surface would give way with the escape of watery fluid. In this way the size of the tumor was reduced over one-half in volume and to such an extent that it could be almost entirely pushed into the left choana, but the growth still eluded the wire loop. Further attempts were postponed until the next day, when, without ether, no difficulty was experienced in removing the tumor from the nose with the snare.

During all these maneuvers the loss of blood was very trifling. The tumor in its reduced dimensions was about the size of an English walnut and its surface was lobulated, each lobule proving to be a cyst cavity. It was then seen that the growth had sprung by a small pedicle from the middle of the convex surface of the inferior turbinated body about 1 c. m. from its posterior border. There was considerable reaction from the violence of the operative procedures, but this soon subsided. At the end of ten days it was seen that a small edematous polypus, the size of a bean, had formed at the site of the attachment of the former tumor. The mucous membrane elsewhere in both nostrils appeared perfectly healthy. There was no evidence of any sinus suppuration. There was a very small amount of adenoid tissue in the naso-pharynx. The recurring polyp was removed, and in three weeks time another had formed and was removed. At intervals of two to four weeks, for nearly a year, polypi, usually single, formed at approximately the same spot. They were never suffered to become large enough to cause any difficulty in the removal, but it was evident that left unmolested they would have quickly grown to the dimensions of the first tumor. The patient was put on iron and other tonics and the small amount of lymphoid tissue removed from the naso-pharynx. The surface from which the polyp grew was cauterized several times. Nearly all of the polypi contained cysts, and many of them seemed to be nothing more than blebs, which would burst and collapse when the snare was tightened, or even simply from the contact of the wire. Gradually they ceased to recur, and it has now been more than six months since one has appeared. The general health of the patient has remained good from first to last.

Nearly all the material removed was examined microscopically. Uniformly the structure was covered by columnar epithelium and was made up of extremely dilated meshes of connective tissue filled with coagulated fibrin. There were no glands and no blood vessels except

a very few small capillaries. All the cyst cavities were formed by the breaking down of the scanty stroma and the coagulated fibrin strands. The spaces thus formed were irregular, and the walls were the ragged ends of fibrin and a few connective tissue fibers. This was true not only of the cyst cavities of the large mass first removed, but also of the small recurring buds, many of them being apparently only effusions of serum beneath the surface epithelium.

You will perceive that this case presented some unusual features. It is perhaps not devoid of significance in itself that so many exceptions to the usual phenomena are noted in the one case. While we are accustomed to observe the posterior ends of the hypertrophied inferior turbinated bodies become edematous, it is exceedingly unusual to find springing from the surface of this erectile tissue a large pedunculated edematous polypus which in structure presents no resemblance to the bulk of the vascular tissue beneath. At least in my experience this, so far as I remember, is unique. Less exceptional is the age of the patient, although it is very unusual to see edematous nasal polypi in any situation at the age of sixteen. It will be well to bear in mind, in view of what I have to say further on in my remarks, that this tumor may be supposed to have begun its growth shortly after the advent of puberty. The recurrence of nasal polypi after removal is the rule rather than the exception, especially when their place of attachment is near the hiatus semilunaris in purulent disease of the accessory sinuses. We are not accustomed, however, to see them recur with the rapidity they showed in this case after removal, which could be plainly seen in the post nasal mirror to have been radical. They seemed to spring up in the night.

The structure was also exceptional. In the back part of the nose there is usually more fibrous tissue in the polypi than in those growing anteriorly. This is not only observed microscopically, but appreciated clinically. In this growth, however, the fibrous stroma was exceedingly scanty and over large areas very little could be made out, the coagulated fibrin being almost entirely unsupported. This was evidently the explanation of another unusual phenomenon. The usual origin of cystic cavities within edematous polypi is the gradual dilatation of a racemose gland whose conduit has been occluded and whose walls continue to secrete fluid. A few authors have described cyst cavities in nasal polypi as arising from the wide separation of the stroma fibers by serum and the subsequent breaking down of the coagulated fibrin. While I have seen such areas under the microscope they have nearly always hitherto been of minute proportions or of such an appearance as has led me to presume that they were the

result of the hardening and cutting process incidental to preparation for microscopical examination. In this case, however, not only were many minute spaces plainly visible under the microscope, but very large cavities were seen by the naked eye to exist in the fresh polyp, and their rupture was necessary to reduce the size of the growth before removal. I think I mentioned a case before this section of an apparent cyst of the larynx, which, when it had collapsed, was seen to have sprung from an edematous syphilitic infiltration of the subjacent structures. In all probability this was a cyst cavity formed in the manner described above. It will be noted that not only was the original nasal tumor largely made up of these cavities, but the later recurring buds were almost entirely occupied by them.

I have enumerated these exceptional features, not so much with the idea of being able to advance any adequate explanation as because of the hints they give of previously studied and apparently dissociated problems. The scientific world has long grown accustomed to look askance at theories. In fact, we sometimes carry the Baconian philosophy so far as to think that we have no use for theories at all and that they should be rigidly excluded from our thoughts as well as from our logical premises. The modern hunger for facts and its neglect of theories is sufficiently obvious. The Athenian philosopher in his tub and the modern myope with his microscope and test tube are the antipodes of intellectual activity—and of the ridiculous. But, after all, we can no more dispense with theories than we can with facts. Facts are infinite in number. Groping among them at random is a folly that leads nowhere. We must, to some extent, formulate our theory first and then select the facts to support it. If subsequent investigators produce facts which demolish it, well and good, the facts remain. The real harm of theories is that after awhile they are regarded as facts and facts are not accepted because they interfere with theories.

A working theory is as necessary in many of the problems of nasal pathology as in other and broader fields of scientific labor. I have recently had occasion (*N. Y. Med. Journ.*) to refer to the work of Cholewa and Cordes, who, after demonstrating the histological bone changes which take place in atrophic rhinitis, advance the theory that these bone changes antedate the changes in the mucosa and are the cause of them. They liken the bone changes here to those occurring in osteomalacia, saying that the absorption of the inferior turbinated bony structure is due to the continued activity of the osteoclasts in their bone absorption while the osteoblasts have lost their power of bone building. As I have pointed out elsewhere (*Am. Journ. Med.*

Sc., May, 1895), the blood supply to the mucosa is regulated by radicle arteries and veins which lie in bony canals. This is especially true of the excessively vascular tissue of the inferior turbinated bodies. Any process therefore which disturbs these bony canals and their contents must be supposed to exert a marked influence upon the nutrition of the mucosa covering the bone. Hence the theory that there is a primary bone disease in atrophic rhinitis furnishes a plausible explanation of the changes in the mucosa with their attendant symptoms. Now, this attractive superstructure rests upon the assumption of the authors that the bone lesion antedates that of the mucosa. So far as I have been able to see, there are no direct observations reported which establish its validity, but so long as there are no facts which controvert their statements we may be allowed to entertain the theory. It may be remarked in passing that this only moves back by one step the mystery of the disease so long as we fail to account for the origin of the bone trouble.

Now let us bear in mind some of the work of Dr. Woakes, of London, which has been subjected to such severe criticism by many writers in rhinology. In previous papers I have combated many of his statements, but I am now free to confess that in doing so I have overlooked much in his work of which subsequent observation has proved the value. His contention that the bone lesion of the middle turbinated is the primary one in the formation of edematous polypi makes a striking parallel to the theory of Cholewa and Cordes in regard to atrophic rhinitis. Here again there are doubtless many cases in which it is impossible to controvert the assumption by direct observation, but while it is impossible to deny that in some cases the process may have begun in the bone, that is certainly not the rule. Edematous polypi not only frequently spring from mucosa which covers perfectly healthy bone, but frequently also from a mucosa with no underlying bone at all. However, in order to fix in our minds these assumptions of the different authors as to the analogous origin of two different nasal pathological conditions let us reduce them to their simplest terms, for they are sure to be of value in the future study of nasal pathology although they may not finally be accepted as essentially true.

"Bone changes in the inferior turbinate by obstructing the blood supply diminish the nutrition of the parts and thus cause atrophic rhinitis." (Cholewa and Cordes.)

"Inflammation of the spongy bones leads to the formation of edematous polypi." Woakes called the latter myxomata, but this nomenclature has of late years been abandoned. Although Woakes

does not explain how the bone lesion produces the condition in the mucosa which he calls myxoma we may, if we admit the antecedent bone lesion, suppose that it is due to the obstruction of the radicle veins in the bony canals. But as I intimated above we certainly are not able to adduce this cause in many cases.

Nevertheless, in edema of the mucous membrane, we must presume that there is some change in the blood vessels permitting of the transudation of the watery parts of the blood. We know that in certain localities of the body obstruction to the venous circulation causes edema of the tissues or the effusion of serum into closed cavities. While edema of the glottis is not unknown in cardiac, renal and hepatic disease I have never heard that these obstructions to the systemic venous circulation ever cause any edema of the nasal mucosa. We cannot exclude so positively the local obstructions due to inflammatory changes either in the mucosa or its underlying stroma and bone. Although in many previous communications I have stated my belief that edematous polypi are the result of chronic inflammation it is very evident that this assertion only partly explains the phenomenon, because in many cases even where the polypi spring from the middle turbinated region, as well as in this case where it sprang from the erectile tissue of the inferior, the other evidences of inflammation are absent. Here as elsewhere we must not be misled by an attempt to simplify etiology by seizing exclusively on one factor. There is not the shadow of a doubt that the changes produced by inflammation play a very important role in the etiology of the growth of edematous nasal polypi, and yet it is quite as evident from clinical observation that in some cases the nasal mucosa does not present any marked signs of chronic inflammation. Moreover there is not satisfactory evidence that the occurrence of the polypi or of edematous infiltration bear any direct proportion to the severity of the inflammatory condition in cases of chronic rhinitis. It is therefore necessary for us to seek further explanation and not depend exclusively on the mechanical obstruction produced by the inflammatory deposits.

A great deal has been said as to the influence of nasal lesions as an important factor in the causation of hay fever and bronchial asthma. It is undoubtedly true that in a number of cases of hay fever nasal polypi will be found to coexist. During an attack of hay fever it will be seen that the nasal mucosa is reddened and swollen and often edematous. When the paroxysm is over the congestion and edema often entirely disappear, but not infrequently it will be found that the mucosa has been left in a waterlogged condition, or if

there have been nasal polypi present during the attack they still persist. Now, it has nearly always been my experience to find on going into the histories of these cases of hay fever or bronchial asthma with nasal polypi that the obstruction of the nostrils due to the polypi has begun after the hay fever has existed for several seasons. It is true that this is not always the case, but I have noted it often enough to have the query arise in my mind whether the hay fever has not caused the polypi, quite as frequently as the presumption that the polypi have caused the hay fever, and I have finally come to believe that neither of these interpretations is the correct one, but that the two phenomena depend to a large extent upon a common cause. It is quite in accordance with the usually accepted doctrine to say that I believe this common cause is to be found in the sympathetic nervous system and more immediately in the vaso-motor nerves.

Let us now return to the consideration of inflammation. What is inflammation? When one tries to define it in its histological sense the answer is long and involved, and, to tell the truth, not always satisfactory. Without, therefore, entering upon the definition it will suffice for the purpose here in view to say that a part of the process is at first a spasm and then a paralysis and resultant dilatation of those smaller blood vessels, both venous and arterial, which have muscular coats; and that this abnormal action is due to the excitation of the vaso-motor nerves which govern the muscles regulating their caliber. This disturbance of the functions of the vaso-motor nerves is an essential factor in the process of inflammation, but the process of inflammation is not necessarily a sequence of the disturbance of the functions of the vaso-motor nerves. There is every reason to believe that it is this dilatation of the blood vessels which is also one result of the sympathetic nerve storm which we call hay fever. Transudation of serum from the vessels into the tissues we know to be one result of vascular dilatation. The radicle arteries and veins lying together in the same bony canal cannot both dilate equally. The wall of the artery being both more muscular and less compressible than that of the vein it must necessarily follow that the lumen of the vein is compressed, and hence the outlet of blood from the mucosa is hindered although the ingress of blood from the dilated arteries is greater than normal. We have thus a plausible explanation of the greater frequency with which a mucosa lying close to the bone in the region of the middle turbinate becomes infiltrated with serum than does the mucosa of the mouth for instance or that of the stomach. Now, in the vascular region of the nose, which is par excellence the inferior turbinated body, we have the surface capillaries

separated from the bone by an underlying network of venous sinuses. It is in this region especially that edematous nasal polypi are so rarely seen. I cannot hope that you have followed my paper closely enough to render a recapitulation unnecessary. If the observations I have here detailed and the deductions which have followed are correct we may sum them up by saying:

Edematous infiltration of the nasal mucosa either sessile or in the form of polypi may result:

First, from mechanical obstruction to venous return by the products of inflammation in the mucosa or in the underlying bone;

Or, second, from the vaso-motor phenomena accompanying chronic inflammation;

Or, third, from the vaso-motor phenomena present in neuroses which may give rise to hay fever and bronchial asthma.

Let us now see how these ideas in regard to the etiology fit in with the report of the exceptional case with which I have prefaced my remarks.

First, as to the age: The growth began shortly after the advent of puberty when the sympathetic nervous system is apt to be unusually disturbed. In this particular case there is absolutely no evidence of such disturbance. The situation upon the inferior turbinated, its persistent recurrence and the rapidity of the growth on the other hand argues against the assumption of causation by the mechanical obstruction of chronic inflammation. Moreover, there was no macroscopic evidence of the presence of inflammation to any marked degree. Its strict localization to one spot, the rapidity of its growth and recurrence, and the peculiarity of the bleb formation of the later recurring buds, they being nothing more, as stated in the history, than localized effusion of serum beneath the epithelium, all these are irreconcilable as far as I see under any other supposition than that contained in the third formula; viz., that there was in this case some sharply localized vaso-motor disturbance which led to the rapid effusion of serum from the vessels.

Whether this is the true explanation or not you will agree with me that such a case should not be allowed to pass across the path of our clinical experience without careful study of the problems it presents. Possibly by such means we may hope to eventually elucidate puzzling questions in etiology and pathology, because we may presume that in the exceptional cases many non-essential factors have been eliminated from the etiology, and many confusing coincidences from the pathology.

A SIMPLE METHOD OF PREPARING A SERVICEABLE SOLUTION OF THE SUPRA-RENAL GLAND FOR NASAL OR LARYNGEAL APPLICATION.

BY M. D. LEDERMAN, M.D., NEW YORK.

Lecturer on Diseases of the Nose and Throat, New York Polyclinic; Assistant Aural Surgeon, Manhattan Eye and Ear Dispensary; Fellow New York Academy of Medicine and American Laryngological, Rhinological and Otological Society, Etc.

The desiccated extract of the supra-renal gland of the sheep has undoubtedly established a permanent position for itself in the therapeutic armamentarium of the rhinologist. Bloodless operations upon the nasal septum are now an actual fact, and the "fear-of-blood" sentiment, so often expressed by neurotic patients, can be conscientiously subdued, with the reassuring statement, that the operation can be performed with the demonstration of but little if any blood. There is one disadvantage of the watery solutions of the desiccated gland, and that is their tendency to rapidly become putrid and unfit for use. The addition of antiseptics undoubtedly retard putrefaction, but at the same time unfortunately interfere with the hemostatic properties of the gland. For the past few months I have been experimenting with formalin, carbolic acid, corrosive sublimate and boracic acid, and have found that in solution they all prohibit the marked vaso-constricting action of the gland.

To overcome this rapid tendency to decomposition the writer has followed the suggestion of Dr. C. Fisch, of St. Louis, and employed a glycerine solution with satisfactory results. Glycerine being somewhat antiseptic, is sufficiently active in a twenty-five per cent watery solution to prevent the putrefaction for some time, without retarding the physiological action of the gland. In this strength the solution is not too viscid, and can be applied in the form of a spray, if so desired. My custom has been to apply the "glycero-watery extract" by means of cotton applicators, both before and immediately after the application of cocain. In this manner, constitutional symptoms of cocainism can be avoided. Two or three applications of the supra-renal extract will prove sufficient. After its use, the swollen mucous membrane rapidly assumes a contracted appearance, and an ischemic condition exists.

We now perform the operation, and we are agreeably surprised to find the field unobstructed, and but little, if any blood in the nose.

A word of caution will not be out of place. Reaction does follow in a number of instances, and it is always judicious to employ a nasal plug for about twenty-four hours over the site of operation.

A tampon of nosophen gauze will prove antiseptic and at the same time keep the wound dry, a peculiar property of nosophen. Other antiseptics may be employed in a similar manner. The writer has been in the habit of using a tampon of "spunk" cut into suitable shape, and dipped into nosophen powder. This substance possesses the advantage of coming away smoothly from the wound, and thus avoiding secondary bleeding. Specially is it of service in cases where the turbinals are in close proximity to the septum. If properly dusted with an antiseptic powder, the "spunk" may be allowed to remain in the nose for forty-eight hours or longer. It is quite porous and promptly absorbs moisture, increasing in size when active, and by its own bulk causing direct pressure, thus acting as a hemostatic. The smooth soft variety is most serviceable.

The solution of the desiccated extract of the supra-renal gland mentioned above is made as follows: About ten (10) grains of the gland (Armour's) is employed to the drachm of a twenty-five (25) per cent glycerine-watery solution. A half or an ounce of this mixture is placed in a wide-mouthed bottle, and well shaken. It is then allowed to stand in the room at the ordinary temperature (68° F.) for about forty-eight or fifty-two hours. During this time the bottle is occasionally shaken. The mixture is then permitted to filter through the ordinary filter paper into a clean bottle. We will then have a slight amber-colored solution, which is ready for use. It is advisable to employ a small quantity of the "extract-solution" at each sitting. In this manner the remainder of the solution, if placed in a cool atmosphere, will keep clear for some time.

38 East Sixtieth Street.

ON AGORAPHOBIA IN RELATION TO EAR-DISEASE.*

BY PROF. A. GUYE, AMSTERDAM.

Agoraphobia is a neurosis consisting in a fear or anguish to cross any larger or smaller open space. It is well known to the neurologists and psychologists since the description given of it by C. Westphal in 1872.†

Not long before him P. Benedikt‡ had described a few cases of the same kind under the name of "Platzschwindel." According to Benedikt, they stood in relation to a form of vertigo, caused by insufficiency of some eye muscles, especially the recti interni. Westphal and other authors who described cases of agoraphobia afterwards did not find this cause existing in their patients.

Legrand du Saulle§ then described a number of cases, and considered them as a form of neurasthenia, sometimes produced, according to him, by abuse of coffee.

E. Cordes|| in the same year as Westphal, published twenty-nine cases, and in a later paper, in 1880, fifty-four new cases. He also considers agoraphobia as a symptom of "reizbare Schwäche," or a neurasthenic anguish, which is caused by exhaustion, by intellectual overwork, by sexual excesses, chronic gastric disturbance, or, in some cases, by the successful cure of obesity.

The neurologists and psychologists seem till the last time not to have noticed the relation of agoraphobia to ear-disease. The first who have done so, to my knowledge, are Lannois and Tournier in Lyon,¶ who published, a few months ago, ten cases of agoraphobia, in which various forms of ear-disease seemed to be the cause of the neurosis. They admit, of course, that there must be a neurasthenic disposition, but, according to them, this disposition existing, the cause of the special form of anguish, which we call agoraphobia, very often is some disease of the ear which causes subjective sound-sensations and vertigo.

*Read by title at the Fourth Annual Meeting of the Western Ophthalmological and Otolaryngological Association, New Orleans, Feb. 10, 1899.

† *Archiv fuer Psychiatrie*, III, 138, 1872.

‡ *Allg. Wiener Med. Zeitung*, 1870, No. 40.

§ *Etude clinique sur la peur des espaces, névrose émotive*, Paris.

|| *Arch. fuer Psychiatrie*, III, p. 521, 1872, and IX, p. 48, 1880.

¶ *Lésions auriculaires cause d'agoraphobie. Annales des Maladies de L'oreille*, Paris, October, 1898.

In some of their cases there was purulent catarrh of the tympanum with perforation of the membrane, in others sclerosis, in one typical Menière's disease. In three cases they saw the agoraphobia disappear after the successful treatment of the ear-disease, and they think that would be more generally the case if the ear-disease itself were not in many cases so intractable.

I have a case in observation since 1880, whose history is, in short, as follows:

Miss X (M. 55), age thirty-three, who was and is still at the head of a large school, came under treatment in December, 1880.

She complained of slight deafness in her right ear since half a year; since two months she had ringing in that ear and now and then some giddiness at rising in the morning. But since two years she complained of agoraphobia, and was not able to go out alone. There was marked swelling and narrowness of the Eustachian tube on that side, chronic nasal catarrh, mouth-breathing, etc. Under treatment the condition of the ear was much improved, and only the agoraphobia remained. Since then there came frequent relapses, sometimes with very marked symptoms of Menière's disease, falling down, vomiting, etc. Under local treatment, and also under the influence of salicylate of soda (0.50—1 gramme twice daily), these symptoms generally subsided in a few weeks, but even when she had been for a year or longer without any vertigo or giddiness, the agoraphobia remained unaltered, and she is never able to go out alone. She does not fear an attack of vertigo, but she has the unexplained anguish to cross a place or street.

A remarkable feature in her case, which has also been noticed by some other authors in some cases, is that when in the country in her holidays she has sometimes been free of agoraphobia and been able to walk about alone for a few days, which she never is when in town. It may be that the frequent movements of the head in looking to the right and left, to which one is obliged in the busy streets of the town, produce slight rotatory sensations which unconsciously may influence the feeling of anxiety.

One other observation which she has made seems worth recording, that is, that after taking a few glasses of wine, being at a watering place with friends, she for the moment felt that she was nearly free of her complaint. Very rightly she did not wish to make use of this symptomatic means. Cordes (l. c.) also mentions the temporary benefit produced by wine in some cases. I have also observed the same in some cases of chronic Menière's disease, but would not, of course, advise it, as the danger of inducing alcoholism would be very great.

I have seen another case of a gentleman where very marked agoraphobia had existed for at least a year before he came under treatment for an acute middle-ear disease. This was successfully treated, but the agoraphobia remained. I can give no further particulars of this case, as the patient died a few years later without my having seen him in his last illness.

My observations in regard to this subject are limited to these two. I do not think that they throw much light on the subject, but nevertheless I thought it worth while to draw your attention to it, in the hope also that psychologists, when they see cases of agoraphobia, which I am sure they do now and then, will pay attention to the state of the ears, and by publishing their observations will promote the co-operation of men who cultivate different parts of the medical science.

The Semiologic Value of Hemorrhage from the Ears—THIAUX—
Journ. des Méd. et de Chir., September 10, 1898.

After a traumatism, such as a fall from a high place, or a fall upon the chin, otorrhagia may be due to the following conditions:

1. When there already exists an inflammatory lesion of the tympanic cavity.
2. When there is a fracture of the external auditory canal.
3. When there is rupture of the tympanum.
4. When the base of the brain is fractured.

In addition to these, a history of the case and the general condition form a valuable aid in making the diagnosis.

SCHLEPPGREGEL.

A New Method of Mobilizing of the Stapes—FARACI—*Archiv. Ital. di Otol., etc.*, VII. 4.

After describing the advantages of this procedure, the author advocates the mobilization of the stapes by a method which enables the operator to leave undisturbed the ossicular chain. A myringectomy is first made and then resection of the external wall of the *aditus ad antrum*. After the operation the tympanic flaps are replaced. The author prefers an instrument similar to those used by oculists for extraction of cataract, with such modifications as are required by the character of the case. He reports two cases with satisfactory results.

SCHLEPPGREGEL.

MASTOID OPERATIONS.*

BY W. F. COLE, M.D., WACO, TEXAS.

It was before this Association, one year since, that I made my report of mastoid operations by means of the dental engine, using cocaine as an anesthetic. At the last meeting I presented before you a patient on both of whose mastoids I had operated. I had intended to present before you again to-day the same patient, who has made complete recovery, but unforeseen circumstances prevent.



Figure 1.

I have here this patient, on whose left mastoid I did this operation about the 20th of December, 1898. This man had been suffering with mastoiditis on the left side for about a year, following an attack of la grippe. Although he has been a man of powerful physique, he had become unable to follow his occupation of engineer. He suffered with tenderness over left mastoid and whole side of head.

*Clinic and Report of Cases by Dr. W. F. Cole, before the Central Texas Medical Association, January 12, 1899.

The sterno-cleido-mastoid muscle was very tender from mastoid to sternum, and he constantly inclined his head to that side. No sup-
puration had ever occurred in the ear, and the drum membrane
showed little evidence of inflammation.

I diagnosed the case as necrotic condition of middle and lower
mastoid cells, with possibly some involvement of antrum.

This is the fifth case in which I have operated in this way, and I
feel confident that my method is destined to supersede all others. I
have pleasure, therefore, in presenting this case before you, and will
detail my method in full. I explained this operation in Atlanta in
March last. I have since reported it to many physicians in London,
New York, Chicago and other places, and so far as I can learn I
am the first to do this operation in this way, that is by using the
dental drill with cocaine as an anesthetic.

As I have already reported in papers, which have been published,
my first operation was a matter of necessity, because the patient
could not take a general anesthetic. A description of the operation
upon this patient will, in a general way, do for all operations. This
man sat upright in a chair. I injected a sterilized cocaine solution
beneath the skin where I intended to do the operation. Attaching
this cutting trephine (see cut) to the engine, I cut out a plug of skin

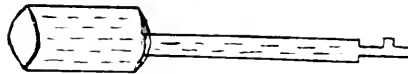


Figure 2. Cutting Trephine.

down to the bone instantly, this being the only painful part of the
operation. Removing the plug of skin, I applied cotton, saturated
with a solution of chromic acid with considerable pressure. This
quickly checked the hemorrhage. I cleaned the bone of muscular
tissue with the electric cautery. With a boring drill I perforated the
outer table, making a small opening, after which I used a large
dental burr. I am pleased to exhibit to you the instruments which I
used. The whole operation with the engine took less than ten min-
utes, and the patient here will assure you that the operation was not
more painful than ordinary dental work.

I found a condition in the mastoid cells resembling tubercle, which
I curetted out carefully.

The probe passed readily into the antrum. On irrigation, the fluid
passed readily down through the nose.

I used a bichloride solution for a few days, when I allowed the wound to close internally, keeping the external wound open as you see.

The patient has grown better from the first, and now, after twenty days, he is practically well.

The other cases which I have had all had suppuration of the middle ear, but as you see in this case I did not even break the drum, and the hearing was never seriously affected. I am delighted with this method of operating, not only because of the results, but because of its simplicity and safety. I did my first operations with much trepidation, but now I do the operation with as little hesitation as I do when I open up the superior maxillary sinus.

I regard the operation as not only more safe, but it has the advantages of doing no unnecessary damage to any part of the ear, and no unsightly scar is left. I feel sure that this operation will appeal to all rational aurists.

In order that you may contrast this method with the usual one, allow me to describe the operations as I saw them done in London during last summer. One hot evening in August I visited a celebrated ear and nose hospital, where I saw two operations done by what is known as the radical operation. The poor patient was put under complete anesthesia. A tremendous incision was made through the skin. The auricle was pulled forward, and skin separated from the bony meatus. The hemorrhage was profuse, keeping one assistant busy with sponges, while two held the wound open with retractors, and the principal proceeded with mallet and chisel to open the mastoid. When the cells were laid bare the whole of the posterior wall of the bony meatus was removed. The incision in the bone was then smoothed with a hand-burr with such force that I feared that the instrument would pierce the brain. Then the skin of the meatus and base of auricle was split posteriorly, the operator running his finger through the opening. The base of the auricle was pulled back, and stitched to the posterior part of the wound. I think I am correct when I say that five able-bodied men and a nurse were more or less actively engaged in this operation, besides one man to wipe the perspiration from the principal surgeon.

I have described this operation specially in order to emphasize the contrast. The description is in no sense a criticism upon the distinguished English surgeons, who as a class are not excelled in the world for ability and courtesy.

While the cure by means of the radical operation is said to be more assured, yet it has some serious drawbacks which should, in my

estimation, prevent its being done except as a last resort. A hideous deformity of the auricle necessarily results; the ossicles and membrana tympani are destroyed, removing all chances for the recovery of useful hearing.

I saw a number of patients attending the hospitals in London on whom this operation had been performed many months previously, and some of them complained bitterly that useful hearing had been destroyed, resulting in total deafness. I confidently predict that such operations will quickly be abandoned because they are irrational; and with it will also go the operation known as ossiculotomy, which has resulted in such an indiscriminate destruction of essential appendages.

With this paper is presented a photograph (figure 1) of the patient exhibited in the clinic. The picture was taken on the same day of the clinic.

A cut of the cutting trephine (figure 2) is also presented—natural size. This trephine may be obtained from Truax, Greene & Co. The kind of drill-handle should be stated.

Exophthalmic Goitre—A. SHAFFER—*Occidental Med. Times*, Vol. xii, No. 12, December, 1898.

The writer's own original ideas are described in this article. He holds that though exophthalmic goitre has primarily all the marks of a pure neurosis, and though the subsequent cardiac and abdominal disturbance soon become prominent, the thyroid is the dominant factor in this disease. He believes it probable that under a peculiar stimulus, the thyroid gland itself throws into the circulation enormous and toxic quantities of its normal secretion. That this secretion has a powerful effect on nutrition, and in large doses is capable of producing the most marked disturbance, has lately been repeatedly demonstrated. He thinks the opinion justified that the thyroid in ophthalmic goitre exhibits signs of increased functional activity as the result of pathologic examinations.

Myxedema is the antipode of goitre, as in the former we have a decreased or abolished secretion due to atrophy or ablation, there being enormous increase of interstitial tissue so as to completely or quite obliterate the secreting function of the gland. The mental and other symptoms in one disease are sharply in contrast with those of the other.

Should his theory prove correct, he believes the removal of the gland justifiable.

EATON.

TWO MASTOID OPERATIONS WITH UNUSUAL FEATURES.*

BY THOS. R. POOLEY, M.D., NEW YORK.

It is the object of this paper to briefly present for your consideration and criticism, two cases of mastoid operations, in which there were some unusual symptoms, occurring soon after the operation and in which the necessity arose to discriminate in their interpretation between the possibility of cerebral complication and other causes, and to point out the fact that there may be other solution, therefore, than the existence of the more often accepted ones, sinus thrombosis, cerebral abscess, either epi-dural or in the brain itself, through extension of the ear disease to the brain, and of less serious portent.

Case I—Mastoid operation, followed by vomiting, lasting for forty-eight hours, with subsidence thereof and subsequent good recovery.

On Wednesday, August 17, 1898, I was called to a distant summer resort to see a little girl of nine years. Early in July she had had an attack of acute follicular tonsilitis, from which she apparently made a good recovery, but about the middle of that month began to have symptoms of acute inflammation of the right middle ear, accompanied with very severe pain for a few days until otorrhea set in with temporary relief. From this time on until I saw her the history was one of transitory improvement with frequent relapses and recurring otorrhea. About ten days before I was called, a specialist whose summer home was near by saw her, but he did not take a very serious view of the case, nor suspect mastoid involvement, prescribed irrigations of the ear with hot bichloride solutions, but did not think an operation indicated. She was also seen by several specialists, in consultation with Dr. G. E. Munroe, the attending physician. According to the statement of this gentleman the swelling behind the ear came on only two days before I saw her, but she had had a considerable rise of temperature for some days before the swelling was noticed. When I saw the little patient on the evening of August 17 she was suffering from the most agonizing pain, which beginning behind the ear, extended to the occiput. It would be impossible to exaggerate the suffering she was undergoing. The otorrhea was not very profuse: there was great swelling of the posterior wall of the

*Read at a Meeting of the Eastern Section of the American Laryngological and Otological Society, January 28, 1899.

auditory canal, so much so as to prevent the position of the perforation of the membrana tympani being made out. The entire mastoid region was the seat of a red, boggy and exquisitely sensitive swelling. Temperature, 103. No brain symptoms were present and the fundus oculi was normal.

It was obvious that an immediate operation was necessary, but its performance had to be deferred until morning, because of the inadvisability of doing it by artificial light and the danger of using ether then.

The poor child passed a night of dreadful suffering, but little relieved by anything I could do.

The following (Thursday) morning at 5:30 o'clock, with the assistance of Drs. Munroe and Bell, the patient fully under ether, I proceeded to operate.

An incision was made through the long axis of the swollen and infiltrated tissues, extending from the upper margin of the mastoid to well beyond its tip. Upon reflecting the periosteum, the bone near the apex seemed soft and vascular, and was readily penetrated by the chisel, without the use of the mallet and a considerable quantity of pus escaped. The opening was carefully enlarged by the chisel and sharp spoon in the direction of the antrum, which was also opened and more pus escaped: a considerable amount of granulation tissue was removed by the spoon until the entire cavity was clean and smooth and free communication with the middle ear was established. The cavity was then syringed with a solution of carbolic acid packed with iodoform gauze, over which the same was loosely laid, covered with absorbent cotton and held in place by a firm roller bandage.

The hemorrhage was trifling and the ether well borne. Immediately after the operation I returned to the city, and did not see the patient again until Friday evening, August 19.

The report from Dr. Munroe was that after the operation the temperature fell to the normal, she passed a comfortable day and slept well during the night, and although she took but little nourishment she vomited frequently. On Friday morning as soon as she awoke, most alarming vomiting set in and continued until Saturday afternoon before it was under control. By the time I reached her bedside, early in the evening, her condition was fast becoming alarming. She had vomited since the early morning almost incessantly, and could retain no food whatever, even a teaspoonful of milk or boullion would be instantly rejected, and when the stomach was quite empty, she made almost constant efforts at vomiting, which often came on in the most sudden and projectile manner, so characteristic of cerebral vomiting.

Small doses of calomel which Dr. Munroe had been giving at short intervals, had not the least effect in checking the vomiting.

I staid with the patient from this time on until the vomiting ceased.

Gave her grain doses of oxalate of cerium every hour, put a mustard plaster on the stomach and fed her carefully with small doses of milk, beef tea and stimulants at short intervals; which, with perfect quiet, arrested the vomiting after it had lasted nearly forty-eight hours.

During all this unpleasant experience the temperature remained about normal, there was no pain, nor other symptoms of cerebral disease.

On Sunday at 2 p. m. there was slight rise of temperature, $99\frac{2}{5}^{\circ}$. The patient was very weak and exhausted, but was cheerful, free from pain and took nourishment well.

Wound was aseptic, hardly any discharge and looked well. I now considered her out of all danger and took my departure, leaving the case in Dr. Munroe's hands, who was kind enough to send me a daily bulletin for sometime.

On the 22d temperature was $98\frac{2}{5}^{\circ}$, had a good night; 23d, morning temperature normal; evening, $99\frac{3}{10}^{\circ}$; 24th, $98\frac{2}{5}^{\circ}$ morning; 25th, evening temperature 98° ; 26th and 27th, morning temperature, $98\frac{1}{5}^{\circ}$; evening, $98\frac{4}{5}^{\circ}$.

In a letter from the doctor, September 4th, he says: "the evening temperature sometimes reaches 99° . Wound healthy—still some discharge. Patient fairly convalescent." From this time on the progress of the case was uneventful, and complete recovery ensued in about six weeks.

Case II—Otitis Media Acuta—Mastoid Extension—Operation—Convalescence Complicated by Acute Empyema of the Frontal Sinus.

D. M., aged thirty-seven, policeman, who had but recently recovered from right-sided hemiplegia, tall, thin and of a cadaveric look, was admitted to the New Amsterdam Eye and Ear Hospital, on Wednesday, September 14th. About a week before his admission he first began to have pain in the tonsillar region, soon thereafter extending to the middle ear on the right side; two days later perforation of the membrana tympani and otorrhea took place. He was treated by Dr. Dan'l Smith, his family physician, with leeches and hot applications. On his admission we found a large perforation of the anterior inferior quadrant of the membrana tympani, bulging of the posterior wall of the auditory canal and but scanty discharge of pus. There was neither swelling nor redness of the

mastoid region, but deep pressure over the bone, especially near its tip, gave rise to considerable pain. His suffering, however, was very great, and his statement to this effect borne out by his appearance.

Pulse, 100; temperature, $100^{\circ}/_{10}$. He was put in bed, Leiter's coil applied over the mastoid, a leech in front of tragus and the ear frequently syringed with hot water which seemed to give him some relief.

September 15th, had a good night, feels better, temperature still 100° , pulse only 72. Tenderness less, only elicited by pressure over the apex of the bone.

During the morning the house surgeon reported that he had had quite a profuse discharge from the right nostril which had a foul smell: at this time, I thought it might have come from the middle ear by way of the Eustachian tube, but the subsequent developments in the case did not bear out this view.

When I saw him again at 3 p. m., in spite of apparent amelioration of his symptoms, I decided to operate, which I did in the presence of his family physician and the hospital staff.

The patient took ether badly, several times becoming very cyanotic and his pulse growing feeble, so that the operation had to be suspended until he was recuscitated. The usual Schwartz's operation was done. The periosteum was somewhat thickened and difficult to detach from the bone: the outer plate was very hard, had to be chiseled into, but on getting into the cortex it was soft, vascular and upon reaching the antrum pus escaped with the blood. After enlarging the opening with the chisel it was surprising (considering the acute nature of the disease) what a quantity of granulation tissue there was. This was all removed by the use of Volkman's spoon: the tip was comparatively healthy, but nevertheless all of the bone which seemed to be in any degree softened was removed.

The large cavity thus formed was carefully irrigated with a warm solution of bichloride 1:5,000, the fluid escaping through the external meatus. The wound was packed with gauze and dressed in the usual way.

At 7:30 p. m. pulse 96, temperature $99^{\circ}/_{2}$. Ether caused much nausea and gastralgia.

September 16th, feels better, complains of throbbing pain in the ear and tinnitus; temperature, 99° ; pulse, 72. At 12 m. temperature rose to $99^{\circ}/_{10}$ and he began to have intense pain in the ear and over the right eyebrow, the wound was dressed and it and the ear syringed by the house doctor which gave him considerable relief.

In the afternoon when I saw him he still complained very much of the frontal pain, which excites his apprehension. Slight palpation over the frontal sinus is painful. During the night he says he has had a profuse purulent discharge from the nose, and during the morning on two different occasions. I now suspected that the localized head-ache might be due to inflammation of the frontal sinus and, therefore, got my colleague, Dr. Robert C. Myles, to make an examination of the nose. He found pus was discharging from the upper anterior end of the hiatus semilunaris, which flowed downward in a perpendicular direction, the position of the pus and direction of its flow indicated that it came from the infundibulum and frontal sinus. Inhalations of carbolic acid, eucalyptol and turpentine, aa. \mathfrak{z} i in aqua Oj gave him great relief from pain. In the evening his temperature rose slightly, $99^2/10^0$. The next day, again there was a slight rise of morning temperature which continued throughout the day, reaching the maximum height of $100^4/10^0$ at 8 p. m.

He still had intermitting head-aches of the same kind, at times very severe, but always better when there was a discharge from the nose or inhalations were used.

From September 19th to 23d there was a slight rise in temperature, the evening temperature reaching 99^1 and a fraction, when it became normal, but from this time on to the 30th he had a sub-normal temperature, ranging from 96^5 to 98^5 .

The wound looked well, there was never any retention of pus, drainage was good, the pain gradually became less and the discharge from the nose stopped entirely, but he was very weak and feeble. On the 30th he left the hospital, and in about three weeks thereafter had entirely recovered and went back to duty on his post as a policeman.

Both of these cases seem to me have been of interest enough to call your attention to.

The first on account of the severe and long continued vomiting, lasting for nearly forty-eight hours after the operation and becoming very serious. The question to decide, was, whether this was due alone to the effect of ether or was caused by cerebral disease.

Absence of fever helped us to exclude any inflammatory affection of the brain or its meninges, or sinus thrombosis, but it was not as decisive an aid in helping in the exclusion of an abscess, either cerebral or epi-dural. From the length of time which the ear disease had existed before the operation, there was a possibility of the existence of either of the conditions.

Sinus thrombosis could be excluded by the absence of any chill or considerable rise of temperature, which remained almost normal, or with but a slight rise throughout, no more, indeed, than could be accounted for by the trauma induced by the operation.

In view of these facts and the absence of pain, I thought it safe to wait, and to use only measures to arrest the vomiting, which was, no doubt, caused by the ether, although its long continuance made me apprehensive of some cerebral complication.

In the second case, although there was at no time after the operation very much rise in the temperature, the highest point reached being $100\frac{6}{10}$, yet the persistent frontal head-ache suggested the possibility of the formation of an abscess.

This localized pain, however, as it turned out, was, undoubtedly due to acute empyema of the frontal sinus, as shown by the purulent discharge from the right nostril, the discharge of pus from the upper end of the hiatus semilunaris, observed by Dr. Myles, and the entire relief afforded by the treatment directed to this condition. My own experience does not enable me to say whether this is a common complication or not, but I wish to call attention to the possibility of its existence as a cause of severe frontal pain, after a mastoid operation, which might be mistaken for a more grave condition.

In conclusion, I desire to point out that there may be other reasons for the symptoms of vomiting and localized pain happening during the healing of a mastoid operation than an extension to the brain or involvement of the sinuses, although we must constantly have these in mind; and that it may sometimes be the course of prudence to act, as was done in these cases, in a conservative manner, rather than too hastily to decide on a further operative procedure.

Ear Diseases Coexistent with Adenoids of the Naso-Pharynx—

An Analysis of 110 Cases—WM. BRAISLIN, Brooklyn—*Phila.*

Med. Journ., February 20, 1899.

In an analytical paper the author calls attention to the intimate anatomical relationship between the pharynx and ear. He emphasizes the well-established view of modern aurists upon the importance of removing the exciting factors when same exist. Ear disease in some degree will always be found accompanying the adenoid growth. Treatment of the aural condition should always be continued for some time after the removal of the growth.

LEDERMAN.

PNEUMATIC MASSAGE IN THE TREATMENT OF DEAFNESS AND TINNITUS.

BY GEO. A. WEBSTER, M.D., BOSTON, MASS.

Senior Aurist to St. Elizabeth's Hospital; Clinical Assistant, Massachusetts Eye and Ear
Infirmary; Instructor in Tuft's College Medical School; Instructor in Boston
Polyclinic; Member Massachusetts Medical Society, Etc.

The following cases represent an attempt to learn something of the value of pneumatic massage. They include conditions resulting from chronic suppuration of the middle ear, varying from small perforation to complete destruction of the tympanic membrane. The observations were made on cases where the suppuration had ceased and the middle ear was dry.

This is a class of cases where the prognosis as regards improvement is not as a rule very favorable, except where an artificial drum improves the hearing.

With one exception, case C, they were treated without the catheter, as we wished to ascertain the results of pneumatic massage alone. To get the best results, treatment to improve the condition and patency of the Eustachian tube would often be necessary in addition to the massage. The tests were made on out-patients and are partly dependent on their observations. They stand as recorded, though in some cases they do not altogether correspond. The massage was given through a Siegle's speculum by means of an air pump controlled by an electric motor. It was so arranged that the speed and power of the impulse could be increased or diminished; and so managed that the first stroke of the piston produced rarefaction of the air in the meatus and suction outward on the tympanum:

Case A. Right: Effect of suppuration, with tinnitus.

TEST SEPT. 10, 1897.			TEST NOV. 17, 1897.		
Watch	R $\frac{1}{60}$	L	Watch	R $\frac{1}{60}$	L
Voice	R $\frac{1}{30}$	L	Voice	R $\frac{1}{25}$	L
Rinné.....	512 V. S.		Rinné.....	512 V. S.	
A. C.....	R 5	L	A. C.....	R 10	L
B. C.....	R 20		B. C.....	R 20	
Weber 256 V. S. R	<	L	Weber 256 V. S. R	>	L

TONE LIMITS:

Galton R 1 L
 Forks R 64 L

TONE LIMITS:

Galton R Normal L
 Forks R 64 L

Pneumatic Massage: Sept. 10, 14, 17, 21, 24, 28, Oct. 1, 8, 16, 26, Nov. 5, 17.

Oct. 5. Tinnitus nearly gone.

Nov. 17. Tinnitus formerly so marked that it interfered with her going to sleep. Now she rarely notices it. Says she can understand conversation better than before treatment.

Case B. Right and Left: Effect of suppuration, with destruction of membrana tympani, with tinnitus.

TEST SEPT. 15, 1897.

Watch $\frac{2}{60}$ $\frac{2}{60}$ L
 Voice $\frac{3}{30}$ $\frac{2}{30}$ L
 Rinne 512 V. S.
 A. C. R 7 L 7
 B. C. R 23 L 18
 Weber 256 V. S. R = L

TEST OCT. 9, 1897.

Watch $\frac{2}{60}$ $\frac{2}{60}$ L
 Voice $\frac{5}{30}$ $\frac{3}{30}$ L
 Rinne 512 V. S.
 A. C. R 7 L 12
 B. C. R 15 L 30
 Weber 256 V. S. R = L

TONE LIMITS:

Galton R 1 L 1.5
 Forks R 256 L 64

TONE LIMITS:

Galton R 1 L 1.5
 Forks R 64 L 64

Nov. 27. Forks 256 each ear.

Tinnitus better for a few days after each treatment, then returns same as before.

Pneumatic Massage: Sept. 15, 18, 25, 29, Oct. 9, 13, 16, 23, 28, Nov. 17, 24, 27.

Has not been treated since November, 1897, except by catheter.

TEST OCT. 18, 1898.

Watch $\frac{2}{60}$ $\frac{2}{60}$ L
 Voice $\frac{1}{20}$ $\frac{2}{20}$ L
 Rinne 512 V. S.
 A. C. R 7 L 15
 B. C. R 17 L 25
 Weber 256 V. S. R = L

TONE LIMITS:

Galton	R1.5	L 2
Forks	R256	L256

Case C. Right: Effect of suppuration with perforation of membrana tympani. Left: Effect of suppuration with destruction of membrana tympani. Tinnitus in both.

TEST SEPT. 13, 1897.

Watch	R— ⁰	L— ⁰
	60	60
Voice	R— ¹	L— ¹
	30	60
Rinné	512 V. S.	
A. C.	R 20	L 10
B. C.	R 25	L 22
Weber 256 V. S. R	=	L

TEST NOV. 5, 1897.

Watch	R— ³	L— ²
	60	60
Voice	R— ¹⁰	L— ⁵
	25	25
Rinné	512 V. S.	
A. C.	R 20	L 7
B. C.	R 25	L 20
Weber 256 V. S. R	<	L

TONE LIMITS:

Galton	R 1.	L 1.
Forks	R 64	L 64

TONE LIMITS:

Galton	R 1.	L 1.
Forks	R 64	L 64

Pneumatic massage, both. Catheter, right. Sept. 13, 16, 20, 28, Oct. 1, 8, 12, 19, 22, 26, Nov. 1, 5.

Oct. 22. Tinnitus less.

Case D. Left: Effect of suppuration with perforation of membrana tympani; tinnitus.

TEST SEPT. 24, 1897.

Watch	R	L— ^{1/2}
		60
Voice	R	L
Rinné	512 V. S.	
A. C.	R	L 3
B. C.	R	L 13
Weber 256 V. S. R	.....	L

TEST NOV. 12, 1897.

Watch	R	L— ^{1/2}
		60
Voice	R	L
Rinné	512 V. S.	
A. C.	R	L 15
B. C.	R	L 25
Weber 256 V. S. R	.....	L

TONE LIMITS:

Galton	R	L 1.
Forks	R	L 64

TONE LIMITS:

Galton	R	L 1.
Forks	R	L 64

Pneumatic massage, Sept. 24, Oct. 1, 8, 16, 22, 29, Nov. 5, 12, 19.

Nov. 19, 1897. No tinnitus.

Nov. 4, 1898. Has had but little tinnitus in last year. Has been under treatment (Politzer air douche) most of year. This, however, had been tried before pneumatic massage and had failed to relieve tinnitus. Improvement dates from massage and has been permanent.

Case E. Right: Effect of suppuration with destruction of membrana tympani. Left: Effect of suppuration with tinnitus.

TEST OCT. 28, 1897.

Watch	0	0
.....R—	.....	L—
Voice	R Loud voice	L Loud voice
Rinné	512 V. S.	
A. C.	R 5	L 10
B. C.	R 15	L 15
Weber 256 V. S.	R =	L

TONE LIMITS:

Galton	R 3.5	L 2.5
Forks	R 512	L 64

TEST NOV. 30, 1897.

Watch	R Contact	L Contact
Voice	R Low voice	L Loud whisper
Rinné	512 V. S.	
A. C.	R 7	L 25
B. C.	R 15	L 15
Weber 256 V. S.	R =	L

TONE LIMITS:

Galton	R 2	L 2
Forks	R 256	L 40

Pneumatic massage, Oct. 28. Nov. 1, 2, 3, 4, 5, 6, 8, 9, 11, 15, 18, 22, 26.

Nov. 26. Self and friends observe that patient can hear conversation better. Tinnitus constant for many years, now intermittent.

Case F. Right: Effect of suppuration with perforation of membrana tympani. Left: Effect of suppuration with destruction of membrana tympani

TEST NOV. 12, 1897.

Watch	1	0
.....R—	.....	L—
	60	
	5	
Voice	R—	L Medium voice
	25	
Rinné	512 V. S.	
A. C.	R 30	L 5
B. C.	R 35	L 12
Weber 256 V. S.	R =	L

TONE LIMITS:

Galton	R 2	L 4.5
Forks	R 40	L 512

TEST NOV. 26, 1897.

Watch	1	0
.....R—	.....	L—
	60	
	15	
Voice	R—	L Loud whisper
	25	
Rinné	512 V. S.	
A. C.	R 25	L 7
B. C.	R 10	L 15
Weber 256 V. S.	R =	L

TONE LIMITS:

Galton	R Normal	L 3.5
Forks	R 64	L 512

Pneumatic massage, Nov. 12, 16, 19, 22, 26.

SUMMARY.—HEARING.

Case A. Gain very slight.

Case B. Slight gain at first, followed by slight loss. The loss came after increase in force of massage over that usually given.

Case C. Gain right 9 feet, left 5 feet. In this case the right was treated by catheter also.

Case D. Whisper heard after, not before treatment.

Case E. Watch heard in each ear after, not before treatment. Right increased from loud to low voice, left from loud voice to loud whisper.

Case F. Gain right 10 feet. Left, medium voice to loud whisper.

TINNITUS

Case A. Relief marked.

Case B. Relief temporary only after each treatment.

Case C. Tinnitus less.

Case D. Relief permanent.

Case E. Tinnitus less.

The cases showing the greatest gain in hearing were cases where suppuration had recently ceased. The case D showing relief of tinnitus permanently, was not a recent case.

CONCLUSION.

In the class of cases above mentioned, pneumatic massage may be of considerable value in addition to other means of treatment. I was unable to realize any greater benefit from very rapid vibrations than from slow. I therefore see no advantage to the patient in a motor, but think a Siegle speculum with a hand bulb, or Delstanche's masseur, would do equally well. Though in a series of cases a motor is more convenient for the operator. Moreover, the rapid vibrations were attended with some noise which was at times disagreeable to the patient.

CORRESPONDENCE.

February 10, 1899.

Editors THE LARYNGOSCOPE :

DEAR SIRS—I have only to-day had the good fortune to read your issue of June, 1898, and I feel that an apology is due from me in venturing to offer a criticism of matter which appeared in a number now eight months old. The matter I refer to is contained in the article "What is the Best Operation for Adenoids," which occupies your editorial pages, and it is this circumstance adding so much weight to the opinions therein expressed which impels me to trouble you with so tardy a comment. I trust you will take my appreciation of the importance of your article as my apology. As one would expect in so prominent a journal, your editorial is a review of general opinion, and not an expression of personal bias. At the same time I would venture to say that the criticism of Gottstein's curette shows a want of appreciation of the proper use of that instrument. Speaking of "tough" growths you say, "it is not reasonable to expect that an instrument like Gottstein's forceps (which is evidently a printer's error for 'curette') which scrapes rather than cuts the growth, will thoroughly remove it." It is, of course, clear that you do not personally make use of this instrument, but I think I may also add that you have misinterpreted the experience of those who do so. Gottstein's curette is essentially a cutting instrument, and when the sharp edge is used in a proper condition of repair, the latter will, without difficulty, cut through the toughest and smallest "adenoids" without riding over them or "scraping over the surface," to use your own words. The proper method of using the instrument is not one which is learned in a day, and indeed, I believe, that the principal surgical error for which Gottstein's method is responsible is the deceptive appearance of simplicity, in practiced hands, which has led so many inexperienced operators to undertake its use without detailed instruction. It would be wholly out of place in me to describe the method, which is fully detailed elsewhere by competent authorities, but I would venture to suggest a close observation of the working of this instrument in the removal of post-nasal growths in a case of cleft palate. You will then see that with a firm and somewhat

rapid sweep, following the contours of the space to be cleared, the growths are cleanly severed at their attachment, and subsequent examination under the microscope will convince you that the fibrous structures are contained in the specimen and not left behind denuded of their lymphoid covering. It will also be clear to you how well contrived is this instrument to permit of the removal of masses attached close to the root of the vomer and of small out-lying growths situated, if not in Rosenmüller's fossa, at all events very close to the Eustachian eminences.

I am quite at one with you in thinking that Gottstein's instrument is singularly ill-adapted for "curetting out the narrow recesses on the wall of the space *anterior* to the Eustachian prominences." I am not so temerous as to express any opinion as to the best method of clearing that part of the post-nasal space as I have no experience in the matter. I shall, I think, not be singular in reporting that I have not met with a case requiring that operation after examining several thousand cases of adenoids during the last few years.

In venturing to write to you I have no intention of opening up a discussion on this vexed question as to the best method of operating for adenoids. The operation is one of which all hospital surgeons have a large experience and every opportunity of forming a personal opinion, and it is, I think, for this reason the less desirable that young surgeons should commence their career with a prejudice. I feel that possibly you have not weighed the influence which words, coming from so eminent a source, may have upon the rising generation of rhinologists, and I therefore venture to express a hope that your editorial columns will not permanently pass judgment on Gottstein's method of operating without a somewhat more extended examination of witnesses.

I am, sirs, yours very truly,

ERNEST WAGGETT.

45 Upper Brook Street, London, W.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, February 22, 1899.

Robert C. Myles, M.D., Chairman.

Fibroma of the Naso-Pharynx.

Dr. Francis J. Quinlan presented a tumor of the naso-pharynx which he had removed through the mouth by means of a cold wire snare. He had succeeded in doing this without exciting bleeding, as he had made use of cocain and supra-renal extract. Examination of the specimen had shown it to be a fibroma.

The growth was present for eight years, and during this time the patient was seen by many physicians, as the large size of the neoplasm interfered with respiration as well as deglutition. It was suspended from the pharyngeal vault, filling up the entire rhinopharynx, the iso-pharynx and resting upon the epiglottis and arytenoids. Marked suppurative attacks supervened and unconsciousness was noticed by the parents of the girl. Since its removal marked improvement has taken place, the patient's appetite is better and she now can rest in the recumbent position. She has gained twelve pounds in two weeks.

A Case of Primary Pharyngeal and Laryngeal Tuberculosis Apparently Cured—Remarks on Kalagna, a New Remedy for Tuberculosis.

Dr. Joseph W. Gleitsmann reported this case, and presented the patient for examination.

Regarding the new remedy, kalagna, Dr. Gleitsmann said that it is being furnished by the Belgian Consul in South America, and heretofore the supply of the remedy in this country had been exceedingly limited. This, however, would soon be rectified. The remedy had a taste resembling that of garlic. In Belgium it had been fed in large quantities to a dog without any deleterious effects. The preparation was easily taken, and did not disturb the digestion. Kalagna has been supplied to Dr. Stubbett, of Liberty; Dr. Trudeau, of Savannah; Dr. Henry P. Loomis, of New York, and

Dr. Mechtold, of Staten Island. Last summer Dr. E. L. Trudeau, of the Adirondack Sanitarium, had three patients on this treatment, two being in the beginning, one quite advanced in the disease. His conclusion was that the improvement in the two patients appeared to be accelerated by the remedy, but no more so than he had observed from climatic and other influences. Dr. Stubbert had merely reported that he had treated twenty-five cases with this remedy, with satisfactory results. Dr. Loomis had reported that he had tried it on three cases, and had been pleased with its action. Dr. Mechtold had tried it in three cases. In one of these the patient, a Spaniard, who had been treated four years previously for tuberculosis with large doses of guaiacol and of Koch's tuberculin, and who had been discharged "cured," had returned last summer with a renewal of the symptoms of pulmonary disease. He had then been put on the kalagna, with the result that the symptoms had disappeared, and he had gained in weight. In a second case, that of a German, fifty-four years of age, a laborer in a dusty factory, the symptoms of pulmonary tuberculosis had first appeared last spring. This man had been taking the kalagna since last July, with the result that he had regained his flesh and strength, had been able to resume his occupation and now felt well. No other remedy had been given.

Dr. Gleitsmann then reported the following apparent cure of primary pharyngeal and laryngeal tuberculosis, and presented the patient, a lady of thirty years. He said that she had first come under his treatment during the summer of 1896. At that time the whole free border of the epiglottis had been one ragged ulcer. He had placed her in hospital, and on November 5th had excised the whole border of the epiglottis, and one arytenoid without causing any reaction. Altogether twenty-one pieces of tubercular tissue had been excised. Early in January, 1898, an ulceration appeared on the right side of the base of the tongue, and owing to the tendency to bleeding, lactic acid had been injected twice. The ulcer had completely healed by the latter part of February. On April 12th there had been a large ulcer at the middle of the base of the tongue, and this had proved to be the most obstinate of all to treatment. He had made five submucous injections of lactic acid and had done six curettings. During all this time the dysphagia had been so extreme that she could only take food after insufflation of orthoform. Since December there had been no ulceration or infiltration. At present the patient had her normal weight, looked well, and was apparently cured.

Dr. W. F. Chappell reported, through the Secretary, that in his throat service at the Loomis Sanitarium there had been no success whatever with kalagna, although it had been used quite largely, and that the treatment with it would, therefore, be discontinued.

Dr. Emil Mayer said that he had seen Dr. Gleitsmann's patient last spring at the meeting of the American Laryngological Association, and recalled the undoubted tuberculous manifestations present at that time. The manifest improvement shown here is very encouraging and warrants persistence in operative measures for tuberculosis of the upper air passages.

Dr. Wendell C. Phillips remarked that no mention had been made in the report regarding the bacteriological examinations of the larynx and pharynx.

Dr. Gleitsmann replied that he had unintentionally omitted to mention that a number of bacteriological examinations had been made, and tubercle bacilli found, and that the tissue which had been excised had also been examined, and had been proved to be tubercular tissue. The reports that he had read had referred almost exclusively to general pulmonary tuberculosis, and personally he had not found kalagna to be of value in pharyngeal tuberculosis. It was still used for pulmonary tuberculosis, he understood, in the Loomis Sanitarium.

Remarks on the Etiology of Nasal Polypi.

Dr. Jonathan Wright read this paper. He said that two years ago a girl of sixteen had come to his clinic with a history of left-sided nasal obstruction. Through the right nasal fossa a large mass could be seen, and the left nostril was blocked with polypi of moderate size. A large polyp extended down into the nasopharynx. Repeated attempts at removal of the large tumor had failed, but by evacuating the fluid and so reducing its size it had finally been possible to snare it off. On removal the tumor had been found to be lobulated. It had sprung from the middle of the convex surface of the inferior turbinate body, about one centimeter from its posterior border. At intervals of from two to four weeks for nearly a year polypi had formed near the attachment of the large tumor, and these had been promptly removed and the surface cauterized. It was now more than six months since there had been a recurrence.

It was exceedingly unusual, the speaker said, to find a large, pedunculated edematous polypus springing from this part, and it was also uncommon to observe at this age such rapid recurrence.

The tumor had probably begun to grow shortly after the age of puberty. In the back of the nose there was usually more fibrous tissue in the polypi. Most of the cysts originated from dilatation of the racemose glands, whose ducts had become occluded. In the present case there were very large cavities in the fresh polypus. Not only had the original nasal tumor been made up of these cavities, but the same was true of the recurring buds. Any process which disturbed the bony canals and their contents might be supposed to disturb the mucosa covering the bone. Dr. Woakes, of London, had stated that the bone lesion in the middle turbinate was the primary one in the formation of nasal polypi. Bone changes, by obstructing the blood supply, were supposed to diminish the blood supply and cause atrophic rhinitis. While edema of the glottis was not unknown in cardiac and renal disease, he had never heard that the nasal mucosa underwent such change in these diseases. There could be no doubt that the changes produced by inflammation had much to do with the growth of nasal polypi, but this did not account for all of the etiology. In the majority of cases of hay fever nasal polypi would be found to exist. Usually the obstruction of the nose produced by the polypi did not begin until the hay fever had existed for several seasons. He now believed that the two phenomena were dependent upon a common cause situated in the vaso-motor nerves. A part of the process of inflammation was a spasm, followed by a dilatation of those vessels having muscular coats. There was much reason for believing that hay fever was largely the result of this vaso-motor storm, with the subsequent effusion of serum. The most vascular region of the nose was the inferior turbinate body, and it was in this region especially that polypi occurred. In brief, then, it might be said, that edematous infiltration of the nasal mucosa, either sessile, or in the form of polypi, might result from: (1) Mechanical obstruction to the venous return by the products of inflammation in the mucus or underlying bone, or (2) vaso-motor phenomena accompanying chronic inflammation, or (3) from vaso-motor phenomena present in stenosis, and giving rise to hay fever and bronchial asthma. In the case reported by him, the strict localization to one spot, the rapidity of the recurrence and the nature of the recurrent buds seemed to be best explained by the supposition that there had been in this case a sudden vaso-motor disturbance, leading to the formation of serum.

Dr. H. L. Swain, of New Haven, said that he wished to contribute a mite out of his own individual experience, thus adding to

what had been stated in the paper, but presenting nothing new. Not infrequently cases of nasal polypi were not cured, and probably because of the imperfect knowledge of the pathology of this condition. He had endeavored to show, on a previous occasion, that there was a certain association between the polyp and the membrane from which it grew, a dense fibrous tissue producing a firmer polyp than a more delicate one. A polyp was not a tumor in the sense that it was the growth of any one constituent of the membrane. It was identical in the middle turbinate region with the edematous hypertrophies. A polypus was nothing more than an elongated and dependent edematous hypertrophy, and this edematous hypertrophy differed from the simple only in the fact that in its substance between the fibers an edematous material formed, which stretched the tissue, and by forcing the fiber apart gave rise to the soft gelatinous structure. There must be first an edematous soaking of the tissue for a polyp to occur. The reader of the paper had dwelt upon the theory that the bony change might precede and cause the polyp formation, but personally he could not conceive how this could occur. Also cases existed where a polyp grew from mucous membrane having healthy tone.

Excessive irritability of the nerve fibers of different neurotic individuals led to different expressions—hay fever, neuralgia, nervous dyspepsia, etc. All neurotic subjects were victims of vaso-motor explosions. It was possible that the neurasthenic habit might in some way affect the formation of the blood vessels throughout the whole body—for example, that all the veins might be abnormally thin. It was only necessary to suppose that the venous trunks in the nose had less muscular fiber to have an abundant explanation of why the mucosa of one person became waterlogged, and did not in another. In neurasthenic individuals the hypertrophic tissue in the middle turbinate was often moist and edematous. The theory of the production of atrophy by bone change assumed that there must be some obstruction to the circulation, causing a lack of nutrition, and, therefore, atrophy. Another theory seemed to assume that this same obstruction would produce an opposite effect in the middle turbinate, which does not seem altogether right.

It might be asked why these cases were ever cured if polyp formation were always dependent upon an inherent change in the tissue. The answer was to be found in the fact, that the inherent change in the tissues was in some cases local, the result of inflammation and this caused the polyp formation. In the inveterate

cases the inherent defects, being of constitutional origin, could not be cured by either local or constitutional treatment. Such cases also, ultimately, had bone lesions as the result of prolonged disease of the mucous membrane. He thought it was possible that inveterate cases might, in time, be benefited by some form of organo-therapy—quite possibly by the internal administration of the supra-renal gland.

Dr. J. E. Newcomb said that it was not difficult to see how the polyp formation continued when once it had started. It was known that the vaso-motor system was not fully developed until the age of puberty—a fact which corresponded fairly well with clinical experience. He had seen one case in which there had been a removal of a polypus in a child of eight years, and cases had been reported occurring in children only a few weeks old. Lennox Browne had claimed that there was a polypoid diathesis, and had endeavored to support the view by citing cases in which there were polypi not only in the nose, but also in the bladder and other parts of the body. The vaso-motor theory of the formation of polypi was interesting, but it must be remembered that polypi were often observed in persons in whom we would not expect to find vaso-motor storms.

Dr. W. K. Simpson thought the vaso-motor theory was supported in that type of nasal polypi in which there was a tumor of the inferior or middle turbinate bone which, on being opened, exhibited a mere shell of bone, all honeycombed and filled with polypi. Such a condition could not arise, it seemed to him, from the mucous membrane itself.

Postponed Discussion on Dr. Freudenthal's Paper on "The Treatment of Dysphagia and Cough. Especially in Tuberculosis."

Dr. Emil Mayer said that he had found that certain patients complained very bitterly of tinnitus aurium as a result of the administration of heroin. It was also well to bear in mind that as it was one of the preparations of opium it should be carefully watched. He was convinced that it was a very valuable addition to the materia medica. Regarding the use of orthoform, he would say that it did not seem to him at all necessary to use it in emulsion; his patients had borne it perfectly well in the form of powder.

Dr. Jonathan Wright said that he had been much pleased with the emulsion of orthoform, and he preferred it to any powder because powders were apt to increase the cough in these patients. He had also tried heroin in a most obstinate case of reflex cough.

The remedy had acted well for about a week, in doses of one-fifth of a grain, three or four times a day, and then it had failed just as had the other sedatives.

Dr. Simpson said that he had given heroin in powder, but in this form it had adhered to the paper: hence he believed it would be better to administer it in compressed tablets.

Dr. Freudenthal closed the discussion. He said that although he had given heroin quite extensively, he had never observed tinnitus aurium in connection with its administration. He had advised the use of the emulsion of orthoform, not because the powder could not be tolerated, but because the emulsion prolonged the application of the remedy to the surface. He was sorry that nothing had been said regarding his remarks on photo-therapy, for there was some good in it, even though as yet the nature of its action was not understood.

SIXTH INTERNATIONAL OTOLOGICAL CONGRESS, 1899.

This Congress is to be held in London from August 8th to 12th, under the Presidency of Dr. Urban Pritchard.

The meeting will be held at the Examination Hall of the Royal College of Physicians of London, and Royal College of Surgeons of England, and the following details have been arranged: On Monday evening, August 7th, a preliminary reception will be held by the President elect. On August 8th, 9th, 10th, 11th, the Congress will be in session, and will be followed on Saturday, August 12th, by an excursion for members and their lady friends.

The official languages are English, French, German and Italian.

The subscription, to include a copy of the transactions, is fixed at £1, to be paid to the Treasurer, Mr. A. E. Cumberbatch, 50 Portland Place, London, W., before the opening of the Congress.

The subject chosen for special discussion is "Indications for opening the Mastoid in Chronic Suppurative Otitis Media," which will be introduced by Prof. W. MacEwen, of Glasgow; Dr. H. Knapp, of New York; Dr. Luc, of Paris, and Prof. Politzer, of Vienna.

A museum of specimens and instruments relating to otology, shown by members, will be held during the meeting. Communications regarding the museum should be addressed to Mr. A. H. Cheate, 117 Harley Street, London, W.

Intending members of the Congress are requested to send in their names to the Hon. Secretary General as soon as possible, and in any case *not later than May 1st*. Titles of communications, together with a short abstract of the same, to be sent to the Hon. Secretary General by the same date. According to the regulations of the Congress, no papers shall exceed fifteen minutes in reading; therefore all long communications should be read in abstract.

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ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

Naso-Pharyngeal Polyp of Unusual Size and Form—WEIL—
Wiener Med. Wochenschr., January 26, 1899.

At a meeting of the Vienna Laryngological Society Dr. Weil exhibited a polyp which was attached all along the posterior edge of the vomer. Two hemispherical processes filled the naso-pharynx and obstructed the choanæ. A large branched process filled the right nostril as far as its anterior opening; while a pear-shaped portion, whose lower extremity could only be seen by strongly depressing the tongue, covered the whole posterior pharyngeal wall. Weil succeeded in removing the whole polyp in one piece. Its longest diameter was 12 c. m. and its weight 45 grams. VITTM.

Naso-Pharyngeal Polypus of Enormous Size—MAX THORNER.
Cincinnati—*Med. News*, January 21, 1899.

A white man, thirty years old, had for eight years been troubled with inability to breathe through his nose, fulness in the head and deafness and continuous roaring noises in the ears. He had the characteristic expression of a mouth-breather. Hearing was very much diminished, and the voice had the characteristic nasal twang.

A large polypoid mass of grayish color and glistening surface about the size of a pigeon's egg could be seen protruding below the right side of the soft palate, which was immovable during phonation. Upon lifting the palate with a palate hook, enormous white masses of irregular size were seen to fill the entire post-nasal space. The site of origin of these masses was apparently somewhere on the right side of the pharynx. The left nasal fossa was free, but the right fossa was filled posteriorly with the same polypoid masses.

A cold-wire snare was introduced behind the soft palate, and pushed up as far as possible over the polypoid masses. After some



Exact size of naso-pharyngeal polypus removed from the patient.

difficulty an enormous mass of polypoid tissue was extracted, comprising the entire growth, which represented one large polypus, and which was formed of many large and small lobules. Some of these lobules were of the size of a small hen's egg. The tumor was attached by a slender pedicle of the diameter of a thin lead-pencil to the right lateral wall of the pharynx just in front of the orifice of the Eustachian tube, and after the operation the bleeding point of its insertion could readily be seen with the aid of a rhinoscopic mirror.

The growth was a so-called mucous polypus, a true fibroma edematosum, but not a naso-pharyngeal fibroma. This polypus undoubtedly originated in the posterior portion of the right nasal fossa near the choana, and by reason of its location and weight descended into the post-nasal space, where the conditions for its unusual development were very favorable. The hemorrhage following the operation was insignificant. The largest diameter of this tumor was $2\frac{3}{4}$ inches, its greatest thickness $1\frac{3}{8}$ inches, and its weight 1 ounce 5 drams. No recurrence had taken place eight months after the operation. A. A.

Papilloma of the Nasal Septum—B. DOUGLAS—*N. Y. Med. Jour.*, January 7, 1899.

A clinical history and a description of a case of papilloma of the nose, illustrated by four excellent photo-micrographic views of the specimen. SCHEPPEGRELL.

Sarcoma of the Nasal Septum—J. P. CLARK—*N. Y. Med. Jour.*, January 7, 1899.

A man of thirty-five years had had an obstruction of the left nostril for three months, due to a bluish-gray mass which was removed by the cold wire snare. There were repeated operations, but the patient succumbed to the extensive spread of the disease.

The second case was that of a woman of forty-two years, with family history of cancer. A dark reddish-gray tumor filled the anterior portion of the left nostril. A histologic examination showed it to be a myxo-sarcoma. Transverse incision was made over the bridge of the nose, the nasal bone sawed through, the nose turned down over the mouth and the whole diseased process extirpated. There was no recurrence. The article gives an excellent résumé of the literature of this subject. SCHEPPEGRELL.

Epithelioma of the Nose Treated with Caustic—I. N. BLOOM—*Int. Jour. Surg.*, Vol. xii, No. 1, January, 1899.

Four weeks after the appearance of a pimple on the nose of a lady, aged fifty-three, there was a typical development of epithelioma, involving the base of the nostril, the inside of the ala, and the cartilaginous septum of the left side. There was no history or evidence of tuberculosis, and syphilis was excluded by specific treatment. The growth was curetted completely, and caustic potash applied freely and thoroughly. Patient made a good recovery. Three or four weeks after operation there was a minute spot, which was cauterized: patient is now in good condition. Diagnosis was confirmed by the microscope. EATON.

A Case of Epithelioma of the Left Ala of the Nose—KRAKHT—*Wratch, Warsaw*, No. 46, 1898.

After thorough curetting, the diseased area was cauterized, which was followed by rapid cicatrization without recurrence.

SCHEPPEGRELL.

Headaches, with Especial Reference to Nasal and Ocular Headaches—A. D. MCCONACHIE, Baltimore—*Mary. Med. Journ.*,

March 4, 1899.

- There is no symptom of disease or functional disease which is so general as this affection.

All causes must be looked into. Each organ must be examined, and general causes eliminated, before local disease can be blamed.

Headaches of nasal origin usually begin intermittently; an acute coryza exaggerates the symptom. In a dry atmosphere the attacks are not frequent. The pain may be referred to the brow, temples, eyes or scalp. The general health of the patient suffers: inability to sleep is often present, mental vigor and memory become impaired and melancholia may follow.

Catarrh of the neighboring parts may complicate the nasal disease. Mouth breathing causes a coated tongue, and this suggests dyspepsia to the careless observer.

Inspection of the nasal cavity assists the examiner in arriving at a proper diagnosis. Cocain is a valuable adjuvant in clearing up the cause of the headache in nasal disease.

If any disease of the nose or accessory cavities is found, same must be treated without delay. The eye not infrequently is the exciting factor in chronic forms of headache, and should not be overlooked in trying to find the cause in such conditions.

LEDERMAN.

Connection between Ocular and Nasal Diseases MÜLLER—*Münchener Med. Wochenschr.*, January 17, 1899.

At a meeting of the Medical Society of Magdeburg Dr. Müller read a paper on the above subject. The intimate anatomical relations existing between the eye and the nose are shown. Disturbances are divided into those inflammatory processes which are conveyed directly from the nose into the orbit and those secondary inflammations which result from empyemas of the accessory cavities. In addition to these two forms are the reflex disturbances which are very numerous.

VITTM.

On the Connection between Nasal and Ocular Disease—ERNST WINCKLER—*Sammlung zwangloser Abhandlungen aus dem Gebiete der Nasen- Ohren- Mund- und Hals-Krankheiten*, III Band, Heft 1, 1898.

This valuable treatise should be read in the original by all who are especially interested in the subject. It does not lend itself well to abstracting and anything more than the merest glimpse at the various divisions of the work is impossible here. The author begins with the ordinary intra-nasal diseases, such as hypertrophy, polypus, etc., and endeavors to show their manner of influencing ocular conditions. His conclusion is that the method of influence is threefold: through the circulation of blood and lymph, through continuity of the connective tissue, and through nervous connections.

The anastomoses between the venous systems of the nose and orbit are carefully described, as are also the connections between the lymphatic channels of the two cavities. With similar care the orbital connective tissue is traced into the nose and pharynx. Lastly, the close connection between the nerves of the nose and eye, as regards both sympathetic and sensitive fibers, is shown at length.

In the case of nasal swellings with ocular complications the author says that galvano-cautery should be entirely avoided and advises that all superfluous tissues be removed by some cutting operation. This to avoid post-operative hyperemia and swelling.

The indications for operation are summed up as follows: 1. Where the nasal opening of the lachrymal duct cannot be reached by a probe either on account of a swollen condition of the lower turbinal or because the latter is pushed against the nasal wall by a septal growth. 2. Where ophthalmoscopic examination reveals a hyperemia that can only be explained by local circulatory disturbances. 3. Where sensory disturbances can be referred to the nasal stenosis.

The ocular diseases resulting from empyema of the various accessory cavities are next taken up and dealt with in the same exhaustive manner that characterizes the whole work. The symptoms and conditions caused by empyema of the various sinuses are too numerous even to be mentioned here. A careful survey of the regional anatomy of the different cavities is given. This is followed by a thorough discussion of the abnormalities and variations. This part of the work is illustrated by numerous cuts taken from specimens. The closing pages are devoted to a description of certain operations which have been devised to meet the requirements of the different cases.

Winckler regards the ethmoid with its system of cells as, so to speak, the center of distribution for most of the purulent infections, inasmuch as by direct communication an infection may be carried from this point either upward into the frontal sinus, downward into the maxillary sinus, or backward into the sphenoidal sinus.

VITTUM.

Rhinoplasty by an Adaptation of the Flap-Splitting Principle—

G. C. COTTAM—*Western Med. Rev.*, Vol. iv, No. 1, Jan. 16, 1899.

The author treats only of nasal lesions in which the nasal bones and a small part of the upper lateral cartilages are left intact, and applied to the principle as follows: A lad of sixteen suffered total demolition of the nose almost down to the nasal bones from the bite of a horse. After cicatrization, realizing the futility of employing flaps taken from the cheeks or forehead to form a natural appearing nose, the following procedure was planned and executed: "A transverse incision was made about five millimeters from and parallel with the free border of the portion remaining, extending 3.5 centimeters beyond the maxillary junction on each side. This incision penetrated into the nasal vault and was joined by another at right angles, which severed the part below the first incision from its septal attachment. There was thus fashioned a long, narrow strip

composed of skin and cartilage shaped like a letter U, confined at the ends but free in the middle. This was drawn down and anchored to a new columna taken from the upper lip, a single stitch sufficing. The quadrangular gap thus left above was then filled by sliding flaps from the cheeks. Interrupted open sutures of fine silk were used, and an impervious coating of aristol-collodion applied. Primary union resulted throughout, with the exception of one small spot in the median line. * * * This was promptly remedied by a graft from one arm." [The photograph of this case from unretouched negative shows a remarkably natural looking nose, particularly as to columna and alae.—Ed.] The author believes that the subcuticular suture of Halstead would be valuable in such cases. The fundamental principle emphasized by the author is the transposition of the margins of the upper lateral cartilages to the location of the lower lateral cartilages, so as to form a framework of sufficient rigidity to maintain the contour of the new alae and so preserve the patulousness of the nostrils.

EYON.

Seeing Through the Nose—DOLLIGET—*Revue Int. de Rhin. et Laryng.*, December, 1898.

The author reports a case of a man who learned to see through his nasal cavities after the successive loss of both eyes. The right eye had been lost in childhood; the other eye, as well as the nose, had been lost in a fall upon a stake. A year later he perceived that he was able to distinguish through the nasal aperture the light of day, and also brilliant objects placed beneath it. It is considered probable that the retina had been spared and that there remained an opening of communication between the nasal fosse and the orbital cavity.

SCHIEFFEGRELL.

A New Communication on the Application of the Roentgen Rays in Rhinology and Laryngology—MAX SCHEIER—*Archiv. Int. de Laryngologie*, September 10, 1898.

The article refers to the application of the X-rays in the examination of the frontal sinus, in the study of the physiology of the voice and in the physiology of deglutition. The author believes it to be a useful adjunct in the examination of the frontal sinus, and that it opens up a new field in the study of the physiology of speech and deglutition.

SCHIEFFEGRELL.

A Contribution to the Study of Ozena—C. B. OQUENDO—*Revue Hebdomadaire de Laryngologie, etc.*, September 17, 1898.

The author believes the bacillus of Löwenberg to be the primary cause. He describes the various methods of treatment and gives preference to cupric electrolysis. He has no faith in serum therapy.

SCHIEFFEGRELL.

Foreign Bodies in the Nose and Ear—EMANUEL FINK—*Klinische Vorträge aus dem Gebiete der Otologie, etc.*, II Band, 8 Heft.

A résumé of the ordinary knowledge of the subject, together with the ordinary treatment. As a curiosity may be mentioned a case where Tröltsch removed a number of small pictures of the Virgin Mary from a patient's ear. The explanation offered was that they had been placed there by a hospital companion as a "sure preventive of deafness."

VITTUM.

Some Remarks and Facts not found in Text Books—W. P.

PORCHER—*N. Y. Med. Journal*, January 21, 1899.

The article refers to nasal obstruction and other conditions which form an every-day experience among specialists, the existence of which is frequently not recognized by the patients or by their physicians.

SCHEPPEGRELL.

II. MOUTH AND NASO-PHARYNX.

On Tonsillar Calculi—W. J. AITCHISON ROBERTSON—*British Med. Jour.*, Jan. 7, 1899.

The author records a case of tonsillar calculus in a patient aged fifty, a healthy man, he had had previous attacks of tonsillitis till three years ago, when a glandular abscess formed on the right side of the neck, which was opened and drained, since then has had no more attacks of tonsillitis. Six months ago felt fullness on right side of throat, he woke one night choking and coughed up a stone somewhat oval in shape, $1\frac{3}{4}$ inches in length and $1\frac{1}{2}$ inches in breadth, pale yellow in color and surface presented worm-eaten appearance, it weighs almost one ounce. Where calculi occur patients have generally been subject to repeated attacks of suppurative tonsillitis. The smaller concretions are probably due to the dried up non-extruded carious matter in the enlarged follicle of the tonsils, round which inorganic salts are deposited. The large calculi result probably from the retention of pus in the interior of the tonsil, the abscess has imperfectly discharged itself and the residual matter has undergone caseation and calcification. Analysis showed this calculus to be composed for the greater part of phosphate of lime and magnesia along with a small amount of carbonate.

FOXCROFT.

Syphilitic Sore Throat—J. S. MOREMAN—*Charlotte Med. Jour.*, January, 1899.

It has been estimated that one-third of the civilized world has either inherited or acquired syphilis. While this evidence is hardly believable, the proportion is much greater than most physicians suppose.

Next to the genito-urinary organs, the tonsil is the most frequent location of chancre. In the secondary stage, even before the

characteristic spots have made their appearance, severe pain will be experienced in the pharynx, the origin of which is sometimes difficult to locate. A small ulcer will cause the whole pharynx and adjacent parts to be very painful. In this stage, as well as in the tertiary, the most reliance is in constitutional treatment, although local applications should not be neglected. SCHEFFEGRELL.

Chronic Rhino-Pharyngitis—A. MALHERIE—*Revue Hebdomadaire de Laryngologie, etc.*, October 1, 1898.

Chronic rhino-pharyngitis is considered as distinct from rhinitis, and treatment by curetting is recommended. The author maintains that in the majority of cases the symptoms are due to hypertrophy of the mucous membrane on the site of the pharyngeal tonsil. In these cases, when involution is taking place, the tubular glands atrophy, the lymphoid masses proliferate and become hypertrophied, the whole forming a hard cushion with crypts and fissures, emitting a thick viscid secretion. Local applications are ineffective. The curetting, which should be done under bromide of ethyl, must be more vigorously applied than in children, because the masses are more resistant. SCHEFFEGRELL.

The Uvula in its Relations to Various Abnormal Conditions—G. B. HOPE—*N. Y. Med. Jour.*, December 31, 1898.

A résumé of the various pathologic conditions which give rise to local or reflex disturbances. SCHEFFEGRELL.

On the Causes of Cleft Palate—JOHANN FEIN—*Wiener Med. Wochenschr.*, Jan. 26, 1899.

In an elaborate paper on this subject the author endeavors to show that adenoid vegetations play a very important part in keeping asunder the two approaching folds which should unite to form the palatine arch. He has examined a large number of specimens bearing on this subject and has carefully scrutinized all the cases of cleft palate to which he could gain access. As a result of his researches he says that in almost every case there are either well marked pharyngeal tonsils present, or, in the case of adults, unmistakable evidence of their having been present earlier in life.

Testimony is adduced showing that the adenoid tissue may be well developed as early as the sixteenth week of foetal life.

This to show that the mass may develop early enough to interpose an obstacle to the union of the two halves of the palate. It is further pointed out that in the foetus the various oral structures lie closely packed together and that practically there is no cavity as is the case after birth. This fact would make it much more probable that an adenoid mass might do the mischief.

At last, however, the author is compelled to say that the final and indisputable evidence of the correctness of his views can only be given by some observer who shall obtain an early foetus exhibiting an enlarged adenoid projecting between the two halves of the palate. VITUM.

Polypus of the Uvula—E. H. GRIFFEN—*N. Y. Med. Journ.*; January 28, 1899.

While a man of forty years was being examined for follicular amygdalitis, a polypus on the uvula almost reaching the epiglottis was seen, which had, however, failed to produce irritation.

SCHEPPEGRELL.

Adenoid Vegetations and their Relation to Affections of the Ear—LUCAS—*Revue Hebdomadaire de Laryngologie, Etc.*, February, 1899.

A review of the well-known influence of adenoid vegetations in the etiology of diseases of the ear.

SCHEPPEGRELL.

The Proper Time for Operating on Adenoids—MAX HAGEDORN—*Zeitschr. für Praktische Aerzte*, Jan. 15, 1899.

This is an able paper in which the author describes some of the symptoms which follow adenoid hypertrophy and explains their mechanism. Particularly the nasal obstruction which is so often present when it cannot possibly be purely mechanical. In this case the choanæ may be obstructed at the upper part but an opening exists below. This passage, however, is not free, for often times septal spurs and ridges exist, which, together with the swollen lower turbinals and particularly their posterior portions tend to narrow it down. Furthermore, this is just the region where the tenacious mucus is most apt to accumulate and offer further obstruction to the passage of air.

In regard to the time for operating, Hagedorn says it is as follows:

1. If nasal respiration is obstructed.
2. If frequent attacks of angina appear.
3. If the hearing is disturbed.
4. If there are present nervous symptoms such as cough, enuresis nocturna, headache or aprosexia.

The author has had to operate twice in nursing infants where the obstruction was so great that life itself was threatened, because the children were utterly unable to nurse and breathe at the same time.

VITTM.

Adenoidian Asthma—LEPOUTRE—*Thèse de Lille*, 1898.

Adenoid vegetations produce asthma as a reflex disturbance, the origin of the reflex being the nasal obstruction which causes insufficiency of hematosiis, compels the patient to make more forced and frequent respiratory efforts and precipitates a nervous paroxysm. The prognosis is good.

SCHEPPEGRELL.

III. ACCESSORY SINUSES.

Empyema of the Accessory Cavities—STOLCK—*Wiener Med. Wochenschr.*, January 26, 1899.

At a meeting of the Vienna Laryngological Society Stoerk spoke on the above subject. He first laid stress on the great variety in the anatomical relations of the frontal sinus and the naso-frontal duct. Hence the difficulties experienced in probing the sinus. The direct cause of these difficulties may be either narrowness or unusual direction of the duct or the obstruction offered by the anterior end of the middle turbinal. If the latter is the cause it must be removed, and this is a comparatively insignificant surgical procedure. Only in unskilled hands could an injury to the cribriform plate occur. He then relates two cases where severe ocular disturbances had arisen as a result of empyema of the frontal sinus and the ethmoid cells. In closing he wished to draw the attention of the profession to the relation which exists between diseases of the accessory cavities and certain amauroses; and advised, in all cases of failing vision, that this relationship should not be forgotten.

VITUM.

A Case of Fibroma of the Superior Maxilla—JOS. PREINDLSBERGER—*Wiener Med. Wochenschr.*, January 19, 1899.

Preindlsberger reports a case of the above affection which occurred in a Mohammedan woman who applied to him for relief. From its size and situation the tumor gave rise to some disturbance both of respiration and nutrition. The tumor was immovably fixed to the alveolar process just below the upper lip by a pedicle 10 cm. wide. When the mouth was closed it was wholly covered by the growth which also compressed the nostrils by pushing up the upper lip. The tumor was covered with mucous membrane and seemed firm and hard throughout. It was easily removed, and a section showed it to be a fibroma.

VITUM.*

IV. LARYNX AND TRACHEA.

Persistence of Branchial Clefts—ALFRED ELLIS VAUGHAN—*British Medical Journal*, January 21, 1899.

The author records a case where four members of a family, all females, in three generations, had persistent branchial clefts.

Mrs. M. P., grandmother, one fistula, right side of neck: Miss M. C., granddaughter, two fistulæ, one on either side of neck: Miss A. C., granddaughter, one fistula, left side of neck: Miss F., great granddaughter, one fistula, left side of neck.

FOXROFF.

Syringomyelia with Grave Laryngeal Complications—DRUAILL—*Revue Hebdomadaire de Laryngologie, etc.*, September 10, 1898.

A careful description of the symptoms and pathologic lesions of this infrequent complication of syringomyelia.

SCHEPPEGRELL.

Effect of Foreign Bodies in the Bronchi—R. SEVESTRE—*British Med. Jour.*, Jan. 21, 1899.

A review of the most noticeable changes taking place in the lungs from the effects of foreign bodies in a bronchus, both in the early stages when the lung is collapsed and in the latter stage when the bronchial tubes have thickened walls, are full of secretion and inflammatory changes leading to abscess formation take place.

FOXCROFT.

Complete Bilateral Paralysis of the Recurrent—J. HERZFELD—*Berliner Klin. Wochenschr.*, January 23, 1899.

At a meeting of the Berlin Laryngological Society, Herzfeld demonstrated a specimen obtained from a case of the above affection. These are very rare, not over a dozen being on record. About three years ago slight difficulty in swallowing was noticed. This gradually increased. Three months ago hoarseness appeared, which grew worse until the patient could only speak in a whisper, and even then only with the greatest exertion. The esophageal sound showed an obstruction opposite the bifurcation of the trachea. On laryngological examination it was seen that the cords remained absolutely motionless in the cadaveric position both during phonation and respiration. The glottis was sufficiently large to supply air on ordinary occasions; only during exertion was there slight dyspnea. The patient was unable to cough strongly or to laugh loudly.

The post-mortem showed a large carcinoma of the esophagus, which involved the posterior tracheal wall and completely surrounded both recurrent nerves.

VITTUM.

Chronic Hemorrhagic Tracheal Catarrh—MASSEI—*Archiv. Ital. di Laryngologia*, No. 4, 1898.

This is a morbid entity, which has not heretofore been described, but which the author has observed in a number of cases. The patients appeared frightened, weak and declared that they had been spitting blood. An examination of the chest and larynx revealed nothing abnormal. The trachea, however, gave evidence of recent hemorrhage, and a careful examination showed an area in which there was a perfect vascular network, the varices in each case touching the inferior surface of the vocal cords.

The pathology of the affection and its localization in the sub-glottic region is explained by the excess of pressure to which this region is subjected by the expired air, particularly during phonation. This causes dilatation of the vessels, which are numerous, and the relaxation of their walls. The prognosis is favorable when the general health is good.

SCHEPPEGRELL.

A Study of Vowels—MARAGE—*Revue Hebdomadaire de Laryngologie, Etc.*, Sept. 17, 1898.

An interesting article on the study of vowels by means of the manometric flames of Koenig.

SCHEPPEGRELL.

Multiple Ecchondroma of the Trachea—VON RECKLINGHAUSEN—*Wiener Med. Wochenschr.*, January 5, 1899.

At a meeting of the Medical Society of Strassburg, held Dec. 9th, von Recklinghausen exhibited a case of the above affection, and at the same time a recent case of osteoma of the tracheal mucous membrane. The specimen consisted of a host of small bony scales which had coalesced to form a large bony plate presenting numerous sieve-like openings. Notwithstanding their superficial location it was evident that both the chondroma and the osteoma sprang from the deeper lying tissues, namely the perichondrium. VITRUM.

Thyreotomy in Papilloma of the Larynx in Adults—M. T. HALLIDAY*N. Y. Med. Jour.*, January 7, 1899.

An interesting report of two cases of thyreotomy for laryngeal papilloma in adults. In the first case the growth was removed with scissors, and its point of attachment cauterized, which was followed by uninterrupted recovery.

The second case was removed by the ordinary nasal snare, the base of the growth cauterized with chromic acid. The voice was hoarse, but gradually improved. There were but few attacks of the spasmodic coughing, which had been one of the most severe symptoms of this case. There was no recurrence. SCHLEPPGRIEL.

Spasmodic Closure of the Glottis in the Adult—H. SHILTON*N. Y. Med. Jour.*, January 7, 1899.

The two cases reported are in line with Bosworth's belief that the attacks of spasmodic closure of the glottis in the adult occurring in the day time, especially when exhibiting permanent paralysis or paresis of one or more of the laryngeal abductor muscles, indicate a central nerve lesion, while these attacks occurring at night and not manifesting permanent impairment of motility in the abductors, may be judged purely reflex in character. SCHEPPEGRIEL.

Treatment of Laryngeal Phthisis—R. LAKE—*Jour. L., R., et O.*

February, 1899.

The local treatment of this affection is divided into surgical and non-surgical.

Six clinical heads are suggested as a classification:

1. A granular condition of the vocal cords.
2. Superficial excoriation or ulceration.
3. Edema.
4. Edema and superficial ulceration.
5. Deep ulceration.
6. Mixed edema and deep ulceration.

In classes 1 and 2 intratracheal injections have proven very efficacious.

In cases where swelling or edema alone was present, or where the ulceration was limited, the topical application of drugs was

confined to paints. Surgical assistance, however, gives the best results in this class. The infected tissues should be freely removed with curette or forceps. Formic aldehyde or lactic acid should be used after every intra-laryngeal operation upon a tubercular subject, no matter how small the operation performed.

When the larynx is extensively ulcerated the patient's general condition will not permit of heroic measures. In such cases insufflations of iodoform and orthoform exert a soothing and often partly curative effect.

Dysphagia with existing ulceration is satisfactorily relieved by the application of orthoform. This drug is a non-toxic anodyne.

For intra-tracheal injections he advises naphthaline treated with an emulsifying agent, lanoline 3 per cent. LEDERMAN.

A Case of Chronic Urticaria of the Larynx—W. FREUDENTHAL—

N. Y. Med. Jour., December 31, 1898.

A number of cases of acute urticaria of the larynx have been reported, but this is the first case of chronic urticaria, according to the author, which has been described. The symptom was associated with obstinate urticaria of the skin. The herpetiform prominences with edematous surroundings and other prominent symptoms gave evidence of the neurotic character of the disease, and justified the author in his diagnosis. SCHEPPEGRELL.

V. EAR.

Errors Observed in Oto-Laryngologic Work; their Results and

Remedies—M. A. GOLDSTEIN—*Med. Herald*, Vol. xviii, No. 2, February, 1899.

In this article the author indicates by practical illustration, some of the careless and culpable errors which are frequently met with in the practice of Oto-Laryngology. Two cases of foreign body in the ears of children, where a physician had used vigorous efforts to remove the substances and seriously damaged the deep structures, leads him to conclude that: "First, the removal of a foreign body from the external auditory canal should not be attempted without proper and delicate instruments and should not be undertaken by inexperienced persons.

Second, in the removal of foreign bodies from the ear where the mass is firmly impacted or tightly held by the narrow confines of the canal, and where some difficulty in the removal of the same is anticipated, the most advisable procedure to prevent restlessness on the part of the patient with movement of the head and possible injury to the parts during the operation, is a moderate chloroform narcosis."

In another case the patient had been treated in a local medical institute for aural suppuration. Facial paralysis ensued, and a prognosis of "threatened apoplexy" made at the "institute." The removal of a large polyp and proper treatment of the tympanum

promptly cured the facial paralysis which was complete, and apparently due to pressure of the growing granulation polyp on the corda tympana nerve.

Another example of criminal carelessness is recounted where the patient presented himself with syphilitic lesions clearly traced to the system of treatment in an "institute," consisting in placing the patients in a row and spraying them successively with the same atomizer and the same solution.

The great difficulty experienced in attempting to check nasal hemorrhage in a case presenting the hemophilic diathesis, is illustrated by the history and treatment of a man so afflicted, and the author points out that "It should be an object lesson to many who regard nasal hemorrhage, traumatic or spontaneous, as of slight importance, and who frequently treat this condition indifferently, to carefully question every patient as to a hemophilic predisposition."

EATON.

Otological Remarks—DUNDAS GRANT, London—*Four, L., R. et O.*, February, 1899.

The author's remarks are based upon Mr. Arthur Cheate's paper, "Operative Interference on the Drum and Ossicles in Chronic Middle Ear Suppuration." Mr. Cheate's paper represents a reasonable average conclusion of various authorities upon this important subject.

Operation is chiefly called for when the discharge persists after careful local treatment, and when the perforation is situated in Shrapnell's membrane, or in the postero-superior quadrant of the drum. The chief cause of attic suppuration is attributed to caries of the head of the malleus, body of the incus or both; caries of some part of the attic walls; collections of cholesteatoma; inspissated pus or granulation tissue. Mr. Cheate has obtained excellent results from the removal of the outer wall of the attic. The removal of the ossicles and remains of the membrane is recommended by most otologists when caries of the ossicles exist, or when they act as an obstruction to drainage.

When the opposite ear is normal ossiculectomy is not advisable. Dr. Grant believes, however, that with experience and improved technique it will be judicious to operate upon a chronic suppurating ear, and thus avoid the possibility of "sympathetic nerve-deafness." If the ear shows signs of diminished function, the question of radical interference in the diseased ear must be urgently considered.

Professor Politzer lays stress upon this counter-indication: "That ossiculectomy should not be performed for the improvement of the hearing-power in an ear by which whispered speech can be heard at the distance of about one meter."

Dr. Grant does not countenance ultra-tympanic surgery in typical chronic sclerotic disease of the middle ear, but he believes that the prospects are totally different in the post-suppurative condition, when the internal ear is fairly intact.

LEDERMAN.

Congenital and Acquired Deformities of the Ear - STETTER—*Klinische Vorträge aus dem Gebiete der Otologie und Pharyngo-Rhinologie*, II Band, 9 Heft, 1898.

This monograph deals at length with the congenital abnormalities of the external ear. The various defects are noted and the operations devised for their removal are described. Absence or occlusion of the external auditory canal is most generally accompanied by structural defects in the middle and internal ear, so that an operation is usually fruitless. The middle ear is sometimes completely filled with bony growth so that it is, in fact, obliterated. Deformity of the drum-head alone is very rare and those cases of reported congenital perforation are to be looked on with suspicion, as pathological processes may bring about this condition very early in life.

Abnormalities of the ossicles and of the muscles attached to them are of rather frequent occurrence. Quite a number of cases are reported where the Eustachian tube is said to have been very much altered in its calibre, even to the point of obliteration. But so experienced an aurist as Gruber affirms that these defects are the result of early disease, perhaps even of intra-uterine inflammation.

The cavities of the mastoid vary so widely, and that within the bounds of normality, that it is very difficult to point out an undoubted deformity. The defects of the internal ear are largely influenced by heredity. The structures may be absolutely wanting. Again, the cochlea may present a varying number of spirals. The semicircular canals may be wanting in whole or in part. They may be dilated or narrowed. The aqueductus vestibuli may be enormously dilated or it may exist in duplicate.

The acquired deformities of the external ear may take on almost any form as a result of phlegmonous inflammation, or of perichondritis. The author reports a case where all of the cartilages seemed to have undergone ossification.

Haug has recently reported a case of elephantiasis. The affected ear measuring $12\frac{1}{2}$ ctm. in length, 7 ctm. in breadth and 23 ctm. in circumference, while the corresponding measurements of its fellow were 5, $3\frac{1}{2}$ and 10 ctm.

The most important deformities of the external ear are those which result in atresia of the canal. This may result from burns or any inflammation that is followed by much scar tissue. Wounds of various kinds, particularly those resulting from unskillful attempts at extracting a foreign body, may lead to atresia.

In the drum-head the most common abnormality is the perforation, although thickenings and scars are frequently met with.

In the middle ear all kinds of changes and defects—even to total destruction—may result from chronic inflammation or tumors; and the same may be said of the internal ear.

VITTUM.

Tinnitus and Noises of the Ear—BOUCHARD—*Revue Hebdomadaire de Laryngologie, Etc.*, Sept. 17, 1898.

Tinnitus of high pitch is observed in active or passive hyperemia of the auditory organ when the labyrinth is also involved. Tinnitus of low pitch in the majority of cases is of nervous origin, especially in cerebral tumors, affections limited to the labyrinth, and affections of the middle ear with participation of the nervous apparatus. Entotic sounds are observed when the condition of the resonance of the ear is especially favorable (obstruction of the canal, secretions in the tympanum) and when there is hyperemia of the acoustic nerve.

Melodious sounds are a rare phenomena and are due to the excitation of the encephalum. Noises of the ear may be of a reflex character as in neuralgia of the trigeminus, dental neuralgia, glaucoma, migraine, affections of the uterus, stomach, kidneys, liver, and are also the tinnitus of neurasthenia and hysteria. Noises may exist which are compatible with the integrity of the auditory apparatus, such as muscular sounds, sounds due to the rubbing of the temporo-maxillary articulation, etc.

The author recommends the use of quinine, which at first increased and afterwards diminished the tinnitus, not only in the dry and sclerotic form, but also in Meniere's disease.

SCHEPPEGRILL.

Noises in the Ear Treated with Cimicifuga—SLIH SCOTT BISHOP, Chicago—*North American Practitioner*, January, 1899.

The author refers to the article by Robin and Mendel, which lately appeared in *La Médecine Moderne*, and suggests that cimicifuga may act by restoring the normal tension to the ossicular chain. A number of cases are cited in which cimicifuga gave marked relief in tinnitus, especially that resulting from hypertrophic otitis media. In some cases the hearing was improved. The dose given was from twenty to thirty drops daily, in divided doses if headache was produced.

ANDREWS.

Otitis Media Purulenta Chronica—CHEVALIER JACKSON—*Journal of the American Medical Association*, January 28, 1899.

Jackson lays especial stress upon thorough methods of cleansing the ear in suppuration, particularly in syringing with sterilized water and other agents. His first step in the treatment is to cleanse the auditory canal as thoroughly as possible, and drying it with a mop of cotton on an applicator. Then he applies hydrogen dioxide with a mop of cotton and wipes out the canal again. Next he syringes with a warm solution of hydrogen dioxide and then irrigates with warm sterilized water. Finally he dries out the meatus, and, if there still remain any debris, he insufflates a finely powdered digestive powder, such as carica papaya, the South American digesting melon. This routine is repeated daily until the ear is thoroughly clean.

MCLEAN.

Suppuration of the Middle Ear, Complications and Consequences, Etc.—A. D. McCONACHIE—*Maryland Med. Jour.*, Jan. 21, 1899.

The anatomical relationship of the organ is practically described. Attention is directed to the pathological changes which follow an infectious process. The close relation of the tympanic and cranial cavities is dwelt upon. Extension of suppurated disease to the labyrinth is mentioned. Caries of bone should be suspected when polypi and granulation tissue are present. The complications which may arise are noted, but not in detail, as the article is to be continued in another issue.

LEDERMAN.

Cholesteatoma of the Ear—RUDOLF PANSE—*Klinische Vorträge aus dem Gebiete der Otologie, etc.*, II Band, 4 Heft.

This is an excellent paper on the vexed question as to the etiology of Cholesteatoma. The author vigorously defends the view that the epithelial "pearls" come about in a perfectly natural way as the result of antecedent inflammation, the extension of pavement epithelium into the middle ear, and, later on, inadequate means of escape as it is thrown off. Fully two-thirds of the monograph is taken up in going over this matter in the most careful and painstaking manner. The latter part of the paper dealing with examination, symptoms, prognosis, etc., contains nothing new. Under the head of treatment, the author insists upon the importance of operating in such a manner that the suspected cavities may always be under control of the eye. If a careful ocular inspection can be made, the earliest symptom of a relapse may be noted.

VITTUM.

The Manner in which the Mastoid becomes Involved in Middle Ear Inflammations—J. E. SHEPPARD—*Brooklyn Med. Journ.*, March, 1899.

The normal condition is such that any secretion forming in the mastoid antrum should pass through the aditus into the attic, thence to the tympanic cavity proper, through the Eustachian tube into the naso-pharynx. The motion of the cilia on the tubal epithelium favoring such a result.

Under abnormal conditions the tube may be forcibly opened and foreign matter with disease germs may eventually find their way into the mastoid antrum. In infectious diseases sepsis frequently extends from the naso-pharynx.

Congestion and inflammation affecting the mucous membrane, which exists in folds and reduplications in the middle chamber, quickly close up the natural passages and thus causes a retention of secretion. The tension of confined pus in this region is very great. There are ten sets of cells in the mastoid. The *horizontal*, including the antrum, which readily empty their contents into the antrum, and the *vertical set*, which extend downwards toward the mastoid apex.

When pus does not extend beyond the antrum, and the infection is not too virulent, the case may get well without opening the mastoid, providing the middle ear is well drained.

The mastoid cortex may be thick and the local symptoms in this particular region may be absent. Consequently we must not prolong expectant treatment.

In acute inflammation of the middle ear the streptococcus and pneumo-diplo-coccus is most frequently found. In chronic suppuration, the staphylococcus is present.

LEDERMAN.

Cocainization of the Semicircular Canals—CHARLES J. KOENIG—

Wiener Med. Wochenschr., Jan. 12, 1899.

In a paper on the above subject read before the Physiological Club of Vienna, Koenig reaches the following conclusions:

1. Along with Crum-Brown, Breuer, Delage and others, he is of the opinion that the semicircular canals are the organ for the sense of rotation. They notify us as to all active motions of rotation, either of the head alone, or of the body. They, however, do not give us any information as to passive rotation movements, if these last are prolonged and in one direction.

2. Inasmuch as all active movements which effect a change of position of the body are wavelike in form, the semicircular canals keep us informed as to all movements which we make as a whole, and are therefore to that extent the organ of equilibrium.

3. Through their relation to movements that are effected, they can keep us informed as to the comparative situation of the head with reference to the body, and as to the situation of the body with reference to its surroundings.

4. The canals of the left side are more sensitive to rotation movements toward the left than toward the right, and *vice versa*.

5. Irritation of the semicircular canals as well as anesthesia interferes with their function.

6. The semicircular canals are not the organ of the sense of space.

VITTM.

Tuberculosis of the Ear—KREICHMANN—*Münchener Med. Wochenschr.*, January 3, 1899.

At a meeting of the Magdeburg Medical Society, held November 3d, Dr. Kretchmann read a paper on the above subject. He states that tuberculous processes in the outer ear or the external meatus differ in no respect from those affecting the skin in general. Those processes located in the middle ear, however, possess a more individual character and may be divided into three groups. In those of the first group one can see, in favorable cases, miliary nodules in the substance of the tympanic membrane. As a rule, however, these have already degenerated at the time of the first examination, and one sees a number of perforations which rapidly coalesce and lead to a total loss of the drum-head. The mucous lining of the tympanum is thickened, of a yellowish red color, and gives evidence of ulceration. The onset and course are painless. This

form is found in persons who have been rendered cachectic by tuberculous processes in other parts of the body, and are approaching the end. The second type is developed in individuals suffering from tuberculosis, but who still possess considerable power of resistance. Along with a feeling of fullness and a diminished hearing power there is a discharge from the ear. The perforation which is at first present is soon filled with granulations which rapidly increase and fill up the tympanum and its accessory cavities, destroy the drum-head, cause exfoliation of the ossicles, and sometimes break through into the labyrinth or the cranial cavity; erosion of the internal carotid or the jugular vein, and paralysis of the facial nerve may follow. The third form is generally grafted upon a pre-existing chronic purulent inflammation and appears as a circumscribed necrotic spot generally seen on the labyrinthine wall. It may readily be mistaken for a fibrinous deposit, but is a diseased condition of the tissues themselves. Tubercle bacilli can generally be found and the probe often reveals rough bone. The process may long remain stationary. The diseased spots are gradually covered with granulations; these shrink and a renewal of the epithelial covering is begun. This form occurs in those who are just becoming infected with tuberculosis or who inherit it. The treatment may at first be confined to the use of iodoform or balsam of Peru, but these failing, nothing short of destruction of the tuberculous tissue will suffice. If the process is limited, the application of caustics through the external canal may succeed. If the tympanic cavity has been invaded, all the cavities connected with the middle ear must be opened. General treatment must accompany the local.

VITTUM.

A Symptom of Endomastoiditis with Empyema—BARRAGO-
CIARELLA—*Jour. L., R. et O.*, January, 1899.

In two-thirds of the cases operated on by Cozzolino in his clinic, the procedure was justified by the condition found, while the symptoms, both in general and local aspects, failed to indicate surgical interference. The "unique symptom" mentioned by Cozzolino is the speedy reappearance of pus in the tympanic cavity, after same has been cleansed. The author of this article states that in six cases observed by him "Cozzolino symptom" was the only, but unfailing, indication of pus in the mastoid.

LEDERMAN.

An Improved Ear Trumpet—KUGEL—*Revue Hebdomadaire de Laryngologie, etc.*,
October 8, 1898.

The author has designed a trumpet on the principle of the ear of the horse, like which it is shaped, instead of the usual large flaring rim, to concentrate the sounds. This shape obviates the annoying resonance of the ordinary trumpet, especially as there is a number of holes pierced in the conducting tube. Gruber and Politzer endorsed the new trumpet at a recent meeting of the Austrian Society of Otology. Bing also suggested that as the sounds collected by the receiver are all transmitted to the ear together, instead of being

concentrated as when light is focused, the tube that conveys the sounds from the receiver to the ear should be as large as possible, with no space wasted. He, therefore, suppresses the tube altogether and applies the receiver directly to the entrance of the auditory canal, thus securing a fuller tone, and intends to supplement the instrument with a hollow plate over the mastoid apophysis, to promote osseous conductivity.

SCHLIEFFER.

Disturbance of Equilibrium Associated with Defect of Hearing—Labyrinthine Vertigo (Meniere's Disease.)

P. W. ERDMANN—*N. Y. Med. Jour.*, January 28, 1899.

The treatment consisted of pilocarpin and quinine alternated with large doses of bromide containing a few minims of belladonna. The case terminated with a cure.

SCHLIEFFER.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Differential Diagnosis of Pharyngeal Syphilitic Lesions and

Diphtheria—L. S. SOMERS *Philadelphia Med. Jour.*, January 28, 1899.

After referring to the well recognized lesions characteristic of each, the author states that in syphilis the patches on the pharynx and tonsils are not so elevated. The adjacent tissues are not so violently inflamed. The crucial test, bacteriologic examination, however, is the best method in diphtheria.

SCHLIEFFER.

Notes on the Treatment of Diphtheria—THOS. WALD PAIRMAN

Australasian Med. Gazette, Vol. xvii, No. 12, December, 1898.

The writer points out certain elements of treatment which appear to him of importance: *Rest* is essential even in comparatively mild cases. Since the routine use of gargles has been abandoned the number of pharyngeal paralyses has lessened. Applications locally should be as unirritating as possible, the resistance of excitable children causing a nervous condition inimical to recovery. *Local Medication*—This is called for even when antitoxin has been used, since there is often a multiple infection on which it has no effect directly. To be of any use medicaments must reach well behind the tonsil, hence those which can be swallowed are most satisfactory. *Free Diuresis*—This is mentioned in all works on the subject, but recent pathology has demonstrated its eminent importance. The free use of diluents is therefore essential, more especially if antitoxin has not been used.

Antitoxin—The value of this is undoubted, but it should be administered before the third day. *General*—If antitoxin has been used late, or not at all, when there is multiple infection, or when the larynx is involved, much benefit is derived from the bronchitis-kettle kept going constantly in the room.

EATON

Diphtheritic Laryngitis—Intubation—E. D. CAPP—*Texas Med. News*, January, 1899.

A clinical report of three cases, from a study of which the author concludes that there is no comparison between intubation and tracheotomy in these cases: the latter should never be done unless there is some special reason why intubation would not prove successful: intubation with diphtheritic antitoxin makes the prognosis favorable. The tube should be introduced before cyanosis appears, in fact, as soon as the breathing becomes labored. Antitoxin should be given early in the disease, not waiting for distressing symptoms to arise.

SCHEPPEGRELL.

A Case of Severe Hemorrhagic Diphtheria with marked Membranous Development—H. BATTY SHAW—*British Med. Jour.*, Jan. 21, 1899.

Patient, a well nourished girl, aged nine years, was admitted to the University College Hospital Nov. 16, 1897, suffering from difficulty in breathing. Laryngotomy was performed and she died eight or nine hours after being relieved.

The case is interesting from the likeness it bore in the earlier stages to ordinary severe quinsy and from the peculiar appearance of the mouth, it being impossible to define the faucial aperture, the space being occupied by a black sloughy mass which rested close on the tongue so that neither tongue, tonsils nor pharynx could be seen.

The necropsy showed the appearance in the mouth to be due to a very thick diphtherial membrane closely adherent to the soft palate, but merely overlaying the hard palate without being attached to it. The soft palate was remarkably thickened owing both to the edema of the tissues and to the existence of diphtherial membrane, being two-thirds of an inch thick. The pharyngeal wall was greatly thickened, in part by membranous deposit and in part by extravasated blood. Sections were made of the infrahyoid muscles and the muscle fibers were widely separated by blood which in places had torn the muscles across.

Bacteriological culture showed the diphtheria bacillus.

FOXCROFT.

Anatomic and Clinical Study of the Respiratory Passages and their Annexes by the Roentgen Rays—MAURICE MIGNON—*Gazette des Hôpit.*, No. 102, 1898.

This method permits of the examination of the peri-tracheo-bronchial glands, which is frequently difficult by the ordinary methods: of foreign bodies in the lungs, as well as congestion, edema, emphysema, pneumonic, cancerous or tuberculous areas, the limits of hydatid cysts, and finally of alterations of the pleura and modifications of its cavity. The author considers the fluoroscope a valuable addition to the ordinary methods of examination.

SCHEPPEGRELL.

Treatment of Exophthalmic Goitre—KANT—*Revue Méd.*, December, 1898.

The following is recommended:

R Sulphate of duboisine $\frac{1}{120}$ grain
 Water.....30 minims
 M. To be taken twice or three times daily.

As the drug sometimes produces somnolence and inebriety, the effect should be carefully watched. SCHEPPEGRELL.

Thymus Extract in Exophthalmic Goitre—W. RUSHTON PARKER—*British Medical Journal*, January 7, 1899.

The author publishes accounts of four cases of exophthalmic goitre, with photographs of the patients, treated with Thymus extract, and in three of the cases the patients ate largely of lightly cooked lambs' thymus glands. In all the cases the patients improved, but the record will hardly allow the improvement to be definitely traced to the administration of the Thymus extract.

FOXGROVE.

The X-Rays in the Diagnosis of Tuberculosis—ANTONIO ESPINAY CAPO—*Revista de Med. Cir. Prácticas*, November 25, 1898.

The author states the following as the result of his researches:

1. Radiography is a means especially suitable for the early diagnosis of tuberculosis, the study of which should be cultivated by all specialists.
2. There are now data sufficient to diagnosticate by the *tout ensemble* of the radiograph between tuberculosis and the neoplastic conditions of the lungs, but especially to limit the zones invaded by the affecting processes.
3. In pleuritic effusions it is the best and most certain method of diagnosis, especially for the purpose of defining the upper level of the effusion.

SCHEPPEGRELL.

Treatment of Tuberculous Adenitis of the Neck by the Roentgen Rays—HENDRIX—*La Polyclinique*, December, 1898.

The author obtains encouraging results from radiography in scrofulous glands. When the latter are fused together and before caseation has taken place, the rays seem to isolate them, they become mobile, smaller and firmer. If, however, caseation has begun, the rays have a distinctly irritating effect, and will aggravate the disease, and are therefore contraindicated. The author seems to believe that the rays destroy the bacillus, but he apparently made no attempt to verify his theory by excision. SCHEPPEGRELL.

VII. INSTRUMENTS AND THERAPY.

New Instrument—MAX BREITUNG—*Münchener Med. Wochenschr.*, January 10, 1899.

In a short communication the author describes a new instrument for tonsillotomy. This consists of a blade cutting from behind forwards and operated by a wire drawn through the canula of a Krause's snare. Breitung calls it a resectome for the tonsils and says that he uses it principally for removing the "lips" that form after the operation of splitting up the tonsil. VITUM.

New Instruments—L. KATZ—*Berl. Klin. Wochenschr.*, January 30, 1899.

In an article published as noted above the author describes three new instruments. The first, an adjustable curette for the posterior end of the lower turbinal. This is so arranged that after the introduction of the instrument, the curette may be brought up so as to form an obtuse angle with the handle; thus giving a good purchase on the tissue to be removed. Katz advocates its use principally in those cases where the posterior swelling is small and hard, and therefore difficult to seize with a snare.

The second instrument is an adjustable caustic carrier for cauterizing the posterior end of the lower turbinals. It consists of a minute shallow plate attached to the handle by a joint. This plate can be flexed to any angle by means of a trigger device at the opposite end of the handle. The caustic, either nitrate of silver or chromic acid, is to be melted on the plate, which is of pure silver, and carried in opposite the point to be cauterized. The trigger is then pressed down and the plate with its contents thus pressed against the tissue to be destroyed.

The third instrument is a cauterizing probe for the ear and nose. It is much like an ordinary nasal probe except that it has a minute crown-shaped attachment made of gold. This little ring with its fine saw-like teeth secures a much firmer hold on the molten "pearl" of chromic acid, or silver nitrate, than the usual rounded head of a probe. VITUM.

The Treatment of Hyperemic Laryngitis by means of a Ten per Cent Solution of the Suprarenal Gland—SARGNON—*Lyon Med.*, Oct. 2, 1898.

In six cases reported, the effect of the solution as a vaso-motor constrictor was demonstrated.

[In discussing this subject, Dr. Brindel (*Revue Hebdomadaire de Laryngologie*, Nov. 26, 1898,) states that if the application of the suprarenal gland causes contraction of the vessels it is of such a transient character as to be of no value. In his own experiments he found neither a blanching of the mucous membrane nor anesthesia, and the effects were more disagreeable than otherwise.—W. S.] SCHEPPEGRELL.

A Mixture for Coryza—MARELLI—*Riforma Medica*, January 17, 1899.

℞ Extract of hyoscyamus.....	24 grs.
Iodide of potassium,	
Bicarbonate of potassium.....	aa 30 "
Extract of licorice.....	75 "
Anise water.....	1800 "

M. A tablespoonful every four hours.

SCHIFFERLIN.

A Local Application for Nasal Ulcers in Ozena—A. FASANO—*Archiv. Int. di Med. e Chir.*, November 30, 1898.

The author recommends for topical use in the more or less deep ulcerations that are found in inveterate ozena the following:

℞ Aristol.....	150 grs.
Collodion.....	1200 grs.
Castor oil.....	150 grs.

M. The application should be made daily by means of small cotton holders.

SCHIFFERLIN.

The Treatment of Recurrent Epistaxis—RENDO—*Riforma Medica*, January 10, 1899.

℞ Antipyrine.....	7½ grs.
Tannin.....	15 "
Powdered sugar.....	150 "

To be used locally.

SCHIFFERLIN.

Some Remarks upon the Use of the Supra-Renal Gland of the Sheep in Nasal Surgery—C. L. VANSANT, Philadelphia—*Phila. Med. Journ.*, February 25, 1899.

This dessicated extract has proven a valuable addition to the therapeutic resources of the rhinologist. It greatly increases the anesthetic effect of cocain and eucain, and produces a marked ischemia when applied alone. The only disadvantage which watery solutions of this remedy possess is that they soon become putrid.

To remedy this defect the author prepares a fresh solution of the gland daily. He employs five grain capsules of the gland, and employs the following mixture as a menstruum:

℞ Acid boraci.....	gr. xi
Aq. camph.,	
Aq. destillat.....	aa ʒss

He puts one drachm of the above in a two-drachm bottle, adds the contents of one capsule, shakes the mixture thoroughly, then filters and the solution is ready for use. A saturated solution of boracic acid is also serviceable. He mentions a glycerine extract of the fresh gland, made by Mr. F. C. Morgan, of Philadelphia. In that preparation 100 minims are said to represent 67½ grains of the fresh gland.

The process of preparing the glycerine extract must be carefully performed, so as to produce a pure and clean product. This latter preparation can be kept for a long period. Ten drops of this extract (glycerine) added to one drachm of the boric-camphor solution and well shaken is ready for use. LEDERMAN.

The Treatment of Epistaxis—MARC HADOUR—*Revue Int. de Méd., Etc.*, September, 1898.

The author does not use the electro-cautery, which he considers difficult, nor the nitrate of silver, which leaves too soft and superficial an eschar. He prefers chromic acid, a pearl of which is melted on the end of a probe and applied to the bleeding spot.

[Very few men of experience will question the superiority of the electro-cautery over chromic acid for epistaxis. The article does not refer to the advantage of packing with iodoform gauze in such cases.—W. S.] SCHEPPEGRELL.

Creasote in Ozena—FERRARI—*Riforma Medica*, January 10, 1899.

R	Creasote.....	75 grs.
	Alcohol at 70 per cent.....	150 "
	Glycerin.....	600 "
For application on alternate days.		

SCHEPPEGRELL.

Application to the Throat in Whooping Cough—*Tennessee Med. Jour.*, January, 1899.

A local application of a ten per cent solution of citric acid in simple syrup is recommended in this affection. Small quantities of citric acid lemonade frequently given is said to act beneficially both as a prophylactic and curative agent. LEDERMAN.

A New Method of Local Anesthesia in Operations on the Tympanum and Tympanic Membrane—BONAIN—*Revue Hebdomadaire de Laryngologie*, Nov. 29, 1898.

The author has obtained good effects from the following formulæ:

R	Phenol.....	2 grammes
	Menthol.....	1 gramme
	Chlorhydrate of cocain.....	1 gramme

or

R	Phenol.....	
	Menthol.....	
	Chlorhydrate of cocain.....	aa 1 gramme

After sterilizing the auditory canal, the anesthetizing agent is applied by means of a pledget of absorbent cotton. In the cases in which it was used there was at first a light burning sensation which was followed by complete local anesthesia in three minutes.

SCHEPPEGRELL.

Open-Air Treatment of Consumption—A. TUCKER WISE—*N. Y. Med. Journ.*, January 14, 1899.

In discussing the value of the open-air treatment of tuberculosis, the author frequently quotes from the work of the late Dr. George Bodington, of Sutton Coldfield, Warwickshire, who was the first to devise and carry out the present system of generous diet and open-air exposure for the cure of this disease.

SCHEPPEGRELL.

A Note on the Suprarenal Capsule—J. H. THOMPSON—*Kansas City Med. Record*, Vol. xvi, No. 2, February, 1899.

In cases of chronic otorrhea, Thompson finds that where, after washing out the canal, the fundus appears filled with granulations, the membrana swollen and the tympanic cavity occluded by a red and thickened mucosa, the external canal is filled with five grains of the pulverized desiccated suprarenal capsule of the sheep prepared by Armour & Co., Chicago, dissolved in two drams of water, the granulations will disappear at once, the swelling of the mucosa diminish, and the hole in the membrana and the cavity of the middle ear become opened up.

EATON.

Iodole-Menthol in Throat and Nose Affections—*Merck's Archives*, January, 1899.

This preparation is said to be a mixture of iodole with one per cent of menthol. It is calculated to be of special service in the treatment of catarrhal and ulcerous affections of the nose and throat, employed in the form of insufflations. The iodole action is present in marked degree.

LEDERMAN.

Hygiene versus Drugs in the Treatment of Pulmonary Tuberculosis—CHAS. L. MINOR—*N. Y. Med. Journ.*, January 14, 1899.

"No man can treat phthisis long and not realize that nothing which in the least degree upsets the stomach, that very citadel of the consumptive's defenses, can, whatever its theoretical advantages, be anything but a curse to his patient." In this thorough communication the author demonstrates the truth of his text, the value of "hygiene versus drugs in the treatment of pulmonary tuberculosis."

SCHEPPEGRELL.

Orthoform—*Merck's Archives*, January, 1899.

A new form of this drug has been described by Klaussner. It is an evenly fine powder, white in color and cheaper than the old preparation. It is recommended in laryngeal ulcerations, and in hay asthma. It produces anesthesia lasting from eighteen to thirty-six hours. Orthoform is not poisonous.

LEDERMAN.

BOOK REVIEW.

Diseases of the Ear, Nose and Throat and their Accessory Cavities.

By SETH SCOTT BISHOP, M.D., D.C.L., LL.D. Professor of diseases of the Nose, Throat and Ear in the Illinois Medical College, Professor in the Chicago Post-Graduate Medical School and Hospital: Surgeon to the Post-Graduate Hospital, Associate Editor of THE LARYNGOSCOPE, etc. SECOND EDITION. Thoroughly Revised and Enlarged. Illustrated with Ninety-four Chromo-Lithographs and Two-Hundred and Fifteen Half-tone and Photo-engravings. $6\frac{1}{2} \times 9\frac{1}{2}$ inches. Pages xix-554. Extra Cloth, \$4.00 net; Sheep or Half-Russia, \$5.00 net. The F. A. Davis Co., publishers, 1914-16 Cherry street, Philadelphia.

In the review of the first edition of this excellent volume we have expressed the opinion that as a reference manual, both to the specialist and general practitioner, to the post-graduate and to the medical student, this is the most thoroughly practical and serviceable American publication in the recent literature of otology, rhinology and laryngology.

The second edition enhances the worth of this volume in many directions. One of the most valuable features of this work is the unusually large number of excellent and original illustrations and cuts to elucidate the text. The subject matter is concise and offers no unnecessary data and is therefore especially adapted to the needs of the medical student and general practitioner. As the volume is thoroughly up-to-date it should also engage the attention of the active worker in the trio of specialties which it represents.

Among the new features of the second edition we would especially note two new chapters, one on "Related Diseases of the Eye and Nose" and the other on "Life Insurance Affected by Diseases of the Ear, Nose and Throat." A consideration of "Direct Laryngoscopy and Autscopy and Pachydermia Laryngis," profusely illustrated, have been added.

The quick disposal of the first edition is perhaps the best endorsement which this volume can receive and we predict an equally ready sale for successive issues.

An American Text-Book of Diseases of the Eye, Ear, Nose and Throat.

Edited by G. E. DE SCHWEINITZ, A.M., M.D., and B. ALEX. RANDALL, M.A., M.D., Ph.D. Royal octavo volume, 1,252 pages, illustrated with 766 engravings, 59 of them in colors. Cloth, \$7.00; sheep or half morocco, \$8.00 net. W. B. Saunders, 625 Walnut street, Philadelphia, publishers. (Can also be obtained of L. S. Mathews, 714 Pine street, St. Louis.)

Since the publication of Burnett's System of Diseases of the Ear, Nose and Throat no text-book in oto-laryngology, of a classic character, produced by the collaboration of many prominent specialists has made its appearance. The American Text-Book of Diseases of the Eye, Ear, Nose and Throat is a thoroughly classical publication as far as pertains to its exhaustive chapters, the up-to-date character of its subject matter and the prominence of its contributors.

We incline to the opinion, however, that the combination of oto-laryngology with ophthalmology in one volume is unsatisfactory. This grouping of specialties may be a valuable feature in a volume of lesser magnitude, intended rather for the general practitioner and medical post-graduate. Naturally otology, rhinology and laryngology are intimately associated, not only in the literature of this field, but also in practical work; ophthalmology, however, is a distinct medical specialty, independently represented in literature and in practice. The co-relation of diseases of the ear, nose and throat with diseases of the eye could, perhaps, have been conveniently expressed in one chapter devoted to that subject.

There has been a very commendable selection of authors in the preparation of chapters, with which they are especially familiar, and in which they have rendered distinguished and original work.

As a whole the American Text-Book of Diseases of the Eye, Ear, Nose and Throat is one of the most valuable American additions to oto-laryngologic literature.

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ST. LOUIS, MO., MAY, 1899.

No. 5.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

REMARKS ON NASAL INSUFFICIENCY DUE TO EXAGGER- ATED PROMINENCE OF THE ANTERIOR ARCH OF THE CERVICAL VERTEBRÆ.

BY DUNDAS GRANT, M.D., LONDON.

It is with great interest that I read in the LARYNGOSCOPE for February the report of a paper on the above question by Dr. Newcomb and the discussion which followed it in the New York Academy (Section of Laryngology and Rhinology.) The subject forced itself upon my notice some years ago, and in ignorance of the fact that it had already been dealt with by other observers, I brought before the British Laryngological Association several cases illustrating the condition, in April, 1897. The report of my remarks appeared in the *Journal of Laryngology* for August of that year. The following is the account of my most striking case:

••In a tall, overgrown young lady, aged fourteen, the most remarkable mental, aural and other general disturbances were present, until in September, 1892, I removed the then existent crop of adenoids in her naso-pharynx. The improvement in her condition was extraordinary, and her stature increased to an unusual extent. Four years later she was again brought to me on account of the recurrence of the symptoms, and probably of the adenoids. On examination of the naso-pharynx there was indeed a slight redevelopment or regrowth of the pharyngeal tonsil, though not sufficient to account for the nasal obstruction, but while making the examination I was struck

by the remarkable degree of bulging of the cervical vertebræ (the atlas and possibly to a slight extent the axis), which diminished the lumen of the air passage between the hard palate and the posterior wall of the pharynx to such an extent as to almost prevent the introduction of the finger, and certainly to make it extremely difficult to remove the small mass of lymphoid tissue in the hollow lying above this projection. The stenosis of the passage was somewhat diminished when the patient's head was raised forcibly and not bent either forward or backward. In point of fact, the patient had acquired a somewhat exaggerated curvature and allowed her head to sink, so that the bulging was exaggerated from her defective attitude. By means of Quinlan's form of post-nasal forceps it was very easy to remove the growths, as will be obvious when the somewhat peculiar shape of the forceps is considered. This was supplemented by the use of Golding-Bird's post-nasal curette. This latter instrument is obviously the only one which has the slightest chance of reaching such a recess as I have described, where any of the usual modifications of Gottstein's instrument would have been obviously unavailing. The patient was encouraged to hold herself up, and was placed under the care of Miss Chreiman for gymnastic exercises. Mr. Edward Cotterell examined her on account of some obscure injury to the lower part of the spine, and diagnosed a traumatic coccygodynia. A marked improvement took place, the removal of the adenoids being only a supplementary element in this case, as I have no doubt it is in many others."

I beg to draw particular attention to the remarkable applicability of the forceps designed by Dr. Quinlan and the curette by Mr. Golding-Bird to operations on such cases. I was surprised to see no reference to Dr. Quinlan's instrument in the discussion in which he seems to have taken such an active part. I should consider Gottstein's curette as essentially contraindicated, and indeed instances have been reported of the removal of a fragment of bone by means of the instrument when the condition referred to above has been present. The dangers attending such an occurrence are only too obvious. One moral derived from consideration of such cases is that the application of any instrument in the naso-pharynx for the removal of adenoids should be accompanied or immediately preceded by an exploration by means of the operator's finger. I should, therefore, emphasize in all cases, especially those in which the operation is performed under nitrous oxide anesthesia, the desirability of commencing with the finger nail instead of only finishing with it as is very usual.

REPORT OF A CASE OF CONGENITAL NASAL ATRESIA.*

BY HAL FOSTER, A.B., M.D., KANSAS CITY, MO.

Last August Mr. T. brought his little son, aged eight years, to my office. The history of the case will no doubt be interesting.

The boy had never been able to breathe through the diseased nostril. Several operations had been performed on the nose, all of which had resulted in no benefit to the little patient.

The father was a commercial traveler, and had led a dissipated life. He contracted syphilis before marriage, was under the care of a



physician three years and pronounced cured before the birth of the boy. The patient seemed to be a bright, strong boy for his age. The nose was the only trouble he had.

The mother informed me that the nose was closed at the child's birth. There was no other deformity. The nose looked natural in every other way. A definite white fibrous membrane stretching be-

* Read by title at the fourth annual meeting of the Western Ophthalmologic and Otolaryngologic Association, at New Orleans, February 10, 1899.

tween the septum and side wall of the nostril causing a cul-de-sac.

The occlusion existed on one side only. In order that the boy should have the benefit of the doubt in regard to his specific history he was placed on the usual treatment for that malady for eight weeks, after which time I operated on the nose.

The membrane was divided by the surgical drill. The galvano cautery was applied in order that this fibrous membrane might be destroyed. I then inserted a small Asch nasal splint which was held in place by adhesive plaster.

Antiseptic sprays were used three times a day. Euophen was blown in the nose every morning. This treatment resulted in entirely curing the patient. In these cases it is well nigh useless to resort to the knife. I used the Asch splint in order that the wounds would be separated until healed. In this way there would be no chance for reunion.

The Lenval Prize.

This prize, which has been founded by Baron Léon de Lenval, of Nice, will be awarded at the International Otological Congress to be held in London, from August 8th to 11th, 1899.

The regulations for its award which were passed at the Fifth International Otological Congress, held at Florence in 1895, are as follows, viz.:

1. In connection with the International Congresses of Otology, the sum of 3,000 francs has been given to found a prize, bearing the name of "The Lenval Prize."
2. The interest of this sum, which has accumulated between one International Otological Congress and the next, shall be awarded to the author of the most marked progress bearing on the practical treatment of affections of hearing during that time, or to the inventor of any new apparatus, which is readily portable and improves considerably the hearing-power of deaf persons.
3. The sum of 3,000 francs will be deposited in a public bank in the hands of the President of the Jury.
4. The International Otological Congress will elect a jury each time, consisting of seven members. The jury will pronounce its decision at the closing meeting of each Congress.

The members of the jury as at present constituted, are Professor Politzer (Vienna), Dr. Benni (Warsaw), Dr. Gellé (Paris), Prof. Pritchard (London), Prof. St. John Roosa (New York), Prof. Kirchner (Würzburg), and Prof. Grazzi (Florence).

All persons desirous of competing for the prize are requested to communicate without delay with Mr. Cresswell Baber, Hon. Sec. Gen., 46 Brunswick Square, Brighton, England, stating the facts on which their claim is based.

OTOLOGICAL EXPERIENCES DURING THE NAVAL BATTLE OF SANTIAGO ON BOARD THE BATTLESHIP "IOWA."*

BY M. H. SIMONS, M.D., U. S. N.

MR. PRESIDENT AND MEMBERS OF THE SOCIETY: Your vice-president has assigned to me the task of detailing some of the effects of the burning of powder, and of concussion, as seen by myself on the man behind the gun. What happened to the man before the gun is too well known to require description.

During the war just closed two kinds of powder were used on the "Iowa"—the brown, which is made of potass. nitrate, charcoal and sulphur; the brown color is due to the use of under-burnt charcoal. The compound is compressed into hexagonal prisms in size $1\frac{1}{2}$ in. x 1 in., with a longitudinal hole $\frac{1}{4}$ in. in diameter through the center; it is also slow-burning and many of the grains in a charge go over unburned, some as whole grains, which act as dangerous missiles for a few yards; some as dust, which blows back and settles on the clothes, decolorizing them in spots, giving a greasy feel to the exposed skin, and causing a mild and speedy-passing irritation of the conjunctivæ and air passages.

The smokeless powder used on the "Iowa" is made of gun-cotton. There are many kinds, some with a little nitro-glycerine in them others of picric acid mainly; but the pure gun-cotton is more reliable and stable, burns more slowly, and thereby gives one of the great desiderata in the formation of a perfect powder. The cotton is washed in ether or amylc spirits to remove the grease, and soaked in a mixture of strong sulphuric and nitric acids. When this latter process is carried on for some hours at a moderately low temperature, the gun-cotton used in the manufacture of smokeless powder is produced, *i. e.*, the tri-nitrate. Its formula, for convenience, is expressed doubled: $C_{12}H_{14}O_4(NO_3)_6$. (Gun-cotton, or rather cellulose, is in the same value, $C_{12}H_{20}O_{10}$.) The lower forms are used for various chemical purposes, as for making collodion, etc. The essential reaction in the process seems to be the replacement of some of the atoms of hydrogen in the molecule of cellulose by the nitrogen oxides from the nitric acid, and the lower the temperature at which the process is carried on the more certain is the formation of

* Read before the Western Section, American Laryngological, Rhinological and Otolological Society, San Francisco, Cal., March 31, 1899.

the highest nitration. The presence of any of the acids combined in the gun-cotton renders it very unstable: liable to explosion and to deterioration, therefore the most carefully watched part of the process is the washing which is carried on in tanks and rotary machines. After the washing the product is dried and is a powder: this powder, the tri-nitrate, is soluble only in acetone (dimethyl-ketone, C_3H_6O). After solution the gun-cotton is run into moulds for sticks, plates, etc., to fit shells, etc., or compressed into thin, narrow ribands, which are cut into small grains for use in small-arms cartridges. It is thoroughly dried before using to get rid of the acetone. It is now stable, and will not, as far as known, explode when heated unconfined, but will burn slowly, and can be moistened and dried: will not explode when jarred, but requires a special detonator.

The large quantities used in great guns produces a very evident smoke, which, however, is not so dense as to interfere with the gunner's aim, though the telescopic sights sometimes become so coated with a thin film as to require wiping. The chemical reactions produced in firing have not been thoroughly studied, but the imperfect oxidation in the gun causes the formation of carbonic oxide gas, which is changed to the di-oxide, carbonic acid gas, when the breech is opened: but no signs of poisoning by this gas have been noticed. After a few minutes firing the atmosphere of a deck becomes somewhat hazy, and a mildly acid odor is noticeable, somewhat like that caused by the evaporation of vinegar, but the gas is irritating to the conjunctivæ and mucous membranes of the air passages.

During the first three or four days after the fight of July 3d, off Santiago de Cuba, there were developed and treated four cases of acute tonsillitis, one of acute bronchitis and twenty-four cases of mild bronchial catarrh. In all of these there was acute rhinitis, and in thirteen cases there was so great dullness of hearing that it was necessary to place a watch against the ear to make the tick audible. One case of conjunctivitis, mild, also reported for treatment. Doubtless there were many more men with slight inflammation of the nasal passages and of the conjunctiva who did not report for treatment. The older sailors and marines will not, as a rule, report at sick call unless they are suffering badly. The effect and odor, or taste of the fumes, are very similar to those of formaldehyde gas very much diluted.

The modus of the deafness seems to me to be as follows: The inflammation set up by the gas in the nose and throat causes the closure of the pharyngeal opening of the Eustachian tube: the con-

cussion from the firing of the guns drove in the membrana tympani, forcing out a portion of the air in the tympanum: the closure of the outer end of the Eustachian tube by the swelling of the mucous membrane prevents the ingress of air to equalize the pressure on the membrana tympani, consequently it remains rigid and depressed, and will only vibrate to slow and heavy sounds. On examination it apparently is cup-shaped, and the manubrium shows very plainly. The recovery of these cases seems to me to confirm my view of them. In from two to four days about all the cases were well. The treatment consisted in inhaling Dobell's solution from the steam atomizer, though a little tincture of opium was dropped in the ears to satisfy the desire for direct application to the seat of the most evident trouble. After a mis-step or cough there would generally be a "click," and hearing would be restored and the roaring in the ears would cease. I think the roaring was caused by the steady pressure exerted by the membrana tympani through the chain of ossicles upon the vestibule. The click which preceded the recovery of perfect hearing was caused by the sudden opening of the pharyngeal end of the Eustachian.

I advance all this only as a theory of one unskilled in the diseases of the ear. There were only two cases of perforation of the membrana tympani: one of these has recovered with a little dullness of hearing; the other has only a narrow band of the membrana tympani remaining, but that is the portion to which the manubrium is attached and hearing is fair. There was no particular pain in any of these cases of hardness of hearing: generally the patients complained of a roaring sound and a feeling of stuffiness, as if the ear were filled with cotton. In two or three cases slight dullness of hearing has remained in one or both ears, as in my own case.

The effect of concussion from the firing of the great guns most noticeable was a sense of soreness and constriction across the front of the chest, as if one had been struck a severe blow there with a slender bar of iron or wood. Some complained of quite general muscular soreness of the trunk.

This is a simple description of the effects of concussion and of the combustion of powder as noticed in four or five bombardments and one fleet-battle in which the "Iowa" was engaged. The theory for the deafness I advance with much diffidence, hoping that discussion by your skilled body will develop the truth. There is nothing in my reach dealing with the subject to any extent. Dr. Wagner kindly found for me a few paragraphs in a German journal of otology, but they principally consist in a description of how to avoid the full effects of concussion and a note on the best means of protecting the

ear-drums. On shipboard one cannot protect himself by facing this way or that, for the guns are above, below and, in fact, all around you, so you cannot dodge. In this journal is recommended most highly a double ear-pad of wire netting filled with lead-slag. Cotton protects the drum somewhat if a loose wad is placed in the outer end of the canal, but if a firm pledget reaching well down to the membrana tympani is used, as I found was generally the case, I believe that the effects of concussion will be increased, for in two cases of dullness of hearing with partial destruction of the membrana tympani, I found that the distance for the hearing of the tick of a watch was increased from contact with the outer ear without the pledget to nine inches with it. In both of these cases the connection between the drum and the manubrium was still maintained by a narrow strip of the former across the orifice.

I will state, in conclusion, that the washing of the decks after a fight seems to remove immediately all the irritating gas in the atmosphere, and that relief is immediate when the hands and face are dipped in water during the action.

The concussion from the twelve and eight-inch guns is like a heavy blow from a long, blunt body. From the four-inch and six-pounders it is sharper and, at the instant, more disagreeable; but the two cases of perforation found by me were from the eight-inch, which was fired immediately over the gun on the deck below. In both of these cases the men were knocked down.

ANNOUNCEMENT.

The American Laryngological Association will hold its twentieth annual meeting in Chicago on May 22, 23 and 24. Dr. W. E. Casselberry, of Chicago, is President and Dr. H. L. Swain, of New Haven, Secretary. All interested in laryngology are invited to attend.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, March 22, 1899.

Robert C. Myles, M.D., Chairman.

Multiple Papillomata of the Larynx.

Dr. Francis J. Quinlan presented a multiple papillomata of the larynx, consisting of 93 separate and distinct papillomata. They had been removed from a girl, twenty-three years old, who had been absolutely voiceless for a year and a half. Every part of the larynx had seemed to be covered with these masses. After nipping them off, he had been able, with the aid of alcohol treatment, to make some progress. A 10 per cent solution of salicylic acid in absolute alcohol had been rubbed in on the denuded surface left after the operation. For the past six weeks the girl had not only had a speaking voice, but a singing voice. The case had also been seen by Dr. D. Bryson Delavan, and the prognosis given had been very gloomy.

Laryngectomy for Malignant Disease.

Dr. Franck C. Ard, of Plainfield, presented a colored woman who had recovered from two radical operations on the larynx for malignant disease. She was forty-one years of age, and had been referred to him in June, 1898. At that time she had complained only of hoarseness. The family history was good, and there was neither history nor evidence of syphilis. She had always enjoyed good health, with the exception of attacks of tonsillitis. Laryngoscopic examination had revealed an irregular, reddish mass situated just above the anterior commissure of the vocal cords and projecting into the cavity of the larynx. There was no infiltration of the surrounding tissues, no ulceration, no dyspnea and no evidence of glandular infection. At the time the growth had been looked upon as a papilloma. Within a few weeks a troublesome cough had developed. The growth had been removed with the Mackenzie forceps in the latter part of July. He had not again seen the patient until September, when she had stated that for several weeks after the operation she had been very much improved, and that then all the symptoms had returned. Examination had shown a recurrence of the growth at the original site, and of about the same size as the first one.

Specimens from the first tumor had been submitted to several pathologists for examination, and they had reported it to be a typical epithelioma. Owing to the localized character of the growth, it had seemed to be favorable for a radical operation. On November 24, 1898, a partial laryngectomy had been performed by Dr. George E. Brewer, and the patient had left the hospital in about two weeks. Shortly afterward an examination had revealed what was supposed to be granulation tissue, but it had soon proved to be a recurrence. On February 19 the patient had been in such a condition that, after consultation, extirpation of the larynx had been advised, and had been performed by Dr. Brewer according to the Solis Cohen method. After coming out of the anesthetic the patient's condition had been excellent. The tube in the tracheotomy wound had been retained for forty-eight hours, and then removed because of irritation, and the patient had been allowed to breathe through the trachea, which had been sutured to the wound. For the first four days she had been nourished by rectal alimentation, and then small quantities of milk and vichy had been administered by the mouth. At the present time the patient could communicate her wants in a whispered voice.

Dr. Jonathan Wright said that this operation had always appealed to him as a very excellent one where it seemed wise to remove the larynx. The old method of trying to keep open the passage by an artificial larynx was needless, and should be condemned because it caused undue irritation and yielded no better results than where this was not done. The most puzzling thing about the case was that the patient could produce articulate sound. It was ordinarily supposed that considerable exertion was necessary to talk, but it would seem from this case that very little exertion was sufficient to set the air into the requisite vibrations. The small amount of air which this patient was now able to expel by means of her pharyngeal muscles was yet able to set up enough vibration to produce distinct articulate sound.

Dr. M. Lederman said that about nine years ago he had seen in Philadelphia a physician from whom the larynx had been removed for epithelioma. This man wore a vibrating reed, which could be removed at will. The man had a distinct voice, which could be heard across the room, but, of course, it was a monotone. The tracheotomy tube formed a receptacle for the organ-reed used.

Dr. Emil Mayer remarked that he had had an opportunity of seeing this case before the removal of the larynx. Such cases always raised the interesting question of the extent of the operation and also the question of recurrence.

Dr. F. J. Quinlan said, with reference to the labial sounds in these cases, that they were produced in the rhino-pharynx with the aid of the tongue and soft palate. He had at the present time under his care a patient with double adductor paralysis on whom tracheotomy had been done. Although there was absolutely no communication between the larynx and the cavity of the mouth, the man was able to speak better than the patient just presented.

Dr. E. L. Meierhof remarked that about one year ago an article had been published by an experienced operator, in which it had been advised that a preliminary tracheotomy be performed, and the operation itself should be done at a later period. Personally, he believed that a preliminary tracheotomy was preferable.

Dr. Myles said that a few years ago he had presented to this Section a case parallel to the one of Hickey. The operation had been done by Dr. Bodine. The man had had a fairly good whispering voice, produced by the air moving over rough places near the base of the tongue, and then was coined into speech by the lips, tongue, etc. Hickey made for himself vocal cords by a puckering up of the pharyngeal wall above the esophageal opening.

Dr. George E. Brewer said that in these cases everything seemed to depend upon the after-treatment, and he was satisfied that this woman would have died very quickly if it had not been for the excellent nursing which she had received. The majority of these cases died from septic pneumonia, because of the great difficulty of preventing septic infection. The continuous application of hot boric acid solution on compresses, and incessant toil had yielded the present good result. It was fortunate that in this case the diagnosis had been made so early as to allow of the easy removal of the larynx. If the precaution were taken to ligate the two superior thyroid arteries at the beginning, it was practically a bloodless operation.

Dr. Ard, in closing the discussion, stated that preliminary tracheotomy had been done at the time of the partial laryngectomy, but at the time of the complete removal of the larynx, tracheotomy and the radical operation had been done on the same day.

Sarcomata of the Nose.

Dr. Ard then presented a patient whom he had first seen in March, 1897. There had been at that time a history of some nasal obstruction for some weeks previously. Examination had revealed a freely movable tumor of the right nostril, which bled easily. A fragment had been examined, and pronounced to be sarcoma. The tumor had been removed, and there had been no recurrence.

Sarcoma of the Antrum of Highmore.

Dr. Wolff Freudenthal presented a woman, fifty-six years of age, who had been in good health up to a few weeks ago, when breathing through the right nostril had become difficult. At the same time, a swelling had appeared on the cheek, which she thought was an abscess from a decayed tooth. There was a tumor of the nose, which seemed to be connected with the antrum of Highmore. On attempting to remove it by the snare, the bleeding was very free, even after the application of cocain and suprarenal extract. The patient had then begun sneezing so violently that he had to remove a portion of the tumor with the guillotine, and had found it to be sarcoma.

Dr. Thomas J. Harris presented, in connection with his paper, a patient having a sarcoma exhibiting certain unusual features. At the present time it appeared as an ordinary hypertrophic enlargement of the posterior end of the middle turbinate, but as it had repeatedly recurred, and had been carefully examined, the diagnosis of sarcoma seemed well established.

Frontal Sinus Disease.

Dr. Robert C. Myles presented two cases of frontal sinus disease. One, a man, aged thirty-four, had had seven skillful operations by general surgeons. There seemed to be a kind of malnutrition of the bone, due originally to syphilis and the disease had extended gradually until most of the anterior part of the frontal bone had disappeared. It had occurred to him that by skin grafting over the necrosed area on the head, it might be possible to improve the surface nutrition, and so excite a healthy healing process. He had made a horseshoe incision about three inches long, through the scalp and removed a part of the outer table down to the diploe. And after thorough curettage of the flap, scraping and chiselling the roughened bare bone, had succeeded in getting union by first intention over an area about as large as the palm of the hand.

The second case was that of a physician who for ten years past had suffered agonizing headache and pain in the eyes. When first seen, there had been decided bulging of the right anterior ethmoidal cells, and the pus, which was oozing out, indicated a necrosis of the bone. He had removed the anterior end of the middle turbinal and part of the ethmoidal cells and torn out the floor of the sinus with his jack screw turtle-beaked forceps, a quantity of fetid pus was brought away by irrigation. He had then injected liquid alboline containing about fifteen grains of iodoform to the ounce. Within

two days all pain had ceased. The return flow from washing out the frontal sinus now was free from pus. The case was interesting as showing what could be done by adequate drainage even in a case in which an external operation seemed to be indicated.

Dr. Wright said that he had recently operated upon a frontal sinus case of some interest. The case had lasted for two or three months, and pus was coming out from the infundibulum. The maxillary sinus had also been full of pus, as determined by transillumination. He looked upon frontal sinus as the primary seat of the trouble. The man had a very high deviated septum, making it very difficult to secure drainage even after operation upon the frontal sinus. An Ogston-Luc incision had been made, and the sinus had been trephined. This allowed of the escape of pus. With the probe an opening was made into the nose, and the large tube inserted. The outer wound was closed, with the hope of getting primary union. The wound did heal at first, and then a sinus formed owing to a small piece of cotton having been caught in the wound. In such a case, owing to the secretion of pus above, one did not dare to introduce splints for straightening the septum, and yet if this were not done it was next to impossible to secure the necessary drainage.

Dr. Emil Mayer thought it might be well in such a case to bring the septum over with the A-sch forceps without doing a cutting operation, and inserting a tube. He had seen cases of deviation of the septum, which could not be operated upon at the time, keep well over in position by the use of the tube in this way.

Dr. Wendell C. Phillips thought that in discussing these chronic inflammations of the accessory sinuses the fact should not be lost sight of, that there were a number of acute inflammations of these cavities. The temptation was to operate immediately, but if the history pointed to a fairly acute inflammation, it seemed to him good surgery to postpone operation until nature had had a sufficient time to repair the damage. He had had within the last few weeks two cases of acute inflammation of the frontal sinus, and they had both done well without operation.

Dr. Meierhof congratulated Dr. Myles on the excellent result obtained in the case of the physician with frontal sinus disease. It taught a very important lesson, *i. e.*, that the chief object to be sought was through drainage, and that with this, nature would remove the enormously thickened masses. He had seen Jansen, in Berlin, doing a number of operations, which consisted really in excising the anterior wall of the antrum of Highmore. This operation was followed by considerable deformity, although not externally visible, but was opposed by many of Jansen's colleagues.

Primary Sarcoma of the Nose, with a Report of Five Cases.

Dr. Thomas J. Harris read a paper with this title. After detailing the histories of his cases, he stated that he had found reports of fifty-seven other cases since Bosworth had made his report of forty-one cases, thus giving a total of 103 cases of primary sarcoma of the nose. It was extremely probable that some of these cases had resulted from the crude and rough methods of removing polyps. In eighty-seven of the cases the age had been given, and it showed that fully 25 per cent of these cases occurred between the ages of forty and fifty, and that neither youth nor extreme old age was especially liable to this disease. Spindle cell and round cell sarcoma appeared with about equal frequency in the different decades, and next in frequency came myxosarcoma, melanosarcoma and fibrosarcoma, in the order mentioned. In more than one-third of the cases the origin was on the septum, and more than one-fourth of the whole sprang from the cartilaginous septum. In thirty-one of the 103 cases epistaxis had been especially mentioned, and had often been the earliest symptom noticed. Pain had not been a constant symptom. Sarcoma limited to the septum was free from pain. The tendency to spread rapidly was particularly true of sarcoma of the nose, but it was least rapid in those arising from the septum. Nasal sarcoma usually appeared as a tumor of the size of a small hazel nut, in many instances attached to the cartilaginous septum. It was usually of a bright red color, was attached by a pedicle, and bled easily when touched. The diagnosis must rest largely upon microscopical examination, although this was open to many sources of error. Sarcoma must be distinguished from hematoma, abscess and mucous polyp, but especially from epithelioma and carcinoma. Epithelioma appeared as a fungus ulcerating growth, and it, like carcinoma, was usually associated with a peculiar cachexia, and with enlargement of the neighboring lymph nodes. In thirty cases there was a record of recovery, giving a recorded mortality of 46 per cent, but this was almost surely less than the true figure: it was probably considerably more than 50 per cent. The different varieties shared about equally in the number of recoveries, the spindle cell variety having a few more to its credit. Statistics seemed to indicate that the round cell variety was the most malignant. Of the thirty cases reported as cured, thirteen were operated upon by the radical method, and fifteen by the intranasal method. The speaker said if the tumor were situated well anteriorly and attached to the septum, an intranasal operation was indicated, and afforded as good a prognosis as the other.

Dr. M. D. Lederman said that he thought all rhinologists could

indorse the conclusions given in the paper from a clinical standpoint. All of the three or four cases that he had seen had been under forty years of age. Age played an important part in connection with the prognosis. The cases reported in literature as cured had usually been situated anteriorly. Hereditary predisposition on the part of the patient and catarrhal states of the nose probably had a good deal to do with the development of these neoplasms. Their insidious development prevented the early recognition and treatment of the disease. The more normal tissue found in the growth on microscopical examination, the better the prognosis. In regard to traumatism associated with removal of polyps as an etiological factor in sarcoma of the nose, the speaker said that there were sufficient observations to indicate that this was quite possibly one of the causes. The operative treatment should not be postponed too long while attempts were made to control the disease with Coley's toxins. In many cases of sarcoma of the nares there was little or no glandular enlargement; it was only when the growth extended far backward that this was at all prominent. In one case, ligation of the external carotid on both sides had been done by Dr. Dawbarn. There had been an interval of a few days between the two ligations, and when seen a few months later, the growth was about one-third of its former size. Subsequently there had been a radical and extensive operation demanded, which was performed by Dr. Dawbarn, and the patient had been doing well when last seen, about eighteen months after. In this case, the growth had been a small round cell sarcoma, with very little intercellular substance.

Dr. Phillips said that when many of these cases were first seen, it was difficult to determine the original location of the tumor. In a considerable proportion of the cases of sarcoma of the nose there was evidence that the disease had originated elsewhere, as for example, in the antrum. There was a rare class of cases in which the disease originated in the ethmoid cells, or in the sphenoid cells. He was of the opinion that primary sarcoma of the nose was a rare condition. Age certainly played an important part in the etiology of the disease: very many cases made their appearance between the ages of forty and forty-five years. The disease sometimes made its appearance in infants, or very young children, and in these there was commonly a history of traumatism. In the cases that had come under his observation the prominent symptoms had been epistaxis and pain, but these cases had been in the later stages, and the pain was probably the result of pressure. A case should not be reported as permanently cured until three years had elapsed.

Dr. Wright said that the two Italian observers had elaborated the question of the comparative benignity of sarcoma of the nasal septum—a point which had interested him for some time. These observers, working independently, had drawn attention to a large number of cases of sarcoma of the septum, in which, according to the records, recovery had taken place. In all but one or two of the cases coming under his own observation, recovery, so far as he knew, had taken place. The differential diagnosis of small round celled sarcoma in the nose was exceedingly difficult because of the great difficulty of distinguishing between it and syphilis. Many cases of sarcoma showed a decided diminution for a few weeks under the administration of the iodides. He had never seen a case in which after careful inquiry he could feel sure that a growth, originally benign, had become malignant.

Dr. Quinlan said that he had had under observation an angioma of the nasal septum and a fibrosarcoma of the terminal body. Both had recurred as sarcoma. In one there had been no recurrence for four or five years; then an erosion had formed, and the growth had recurred. At the time of the second removal it had been found to be a sarcoma. He had previously reported to the Section the case of a woman from whom an ordinary mucous polypus had been removed. Three years later she had returned with an enormous osteosarcoma involving the entire antrum and floor of the orbit. Ligation of the carotid was an old procedure, and had been successfully resorted to, and reported, by Dr. J. D. Bryant.

Dr. Myles referred to a case in which microscopical examination of a growth of the cartilaginous septum had shown it to be a sarcoma. It was of a bluish-gray color. On incision, large blood-clots had escaped. Microscopical examination of the masses showed nothing but organized blood-clots. The patient would not consent to an operation on the septum. If early operation had been permitted, he thought the patient would have recovered.

Dr. Harris closed the discussion. He said he believed more than one-half of the cases originating from the cartilaginous septum had been reported as cured. He had not excised a part of the cartilage of the septum in either case, yet both had been cured, one for three years. However, in the future he would prefer the removal of a portion of the cartilaginous septum

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ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

The Etiology and Diagnosis of Empyema of the Accessory Sinuses of the Nose.—SCHADLE—*The St. Paul Medical Journal*, January and February, 1899.

The author has given the profession a reproduction of eleven sections of the sinuses accessory to the nasal cavity, and it is owing to their excellency and the importance of the part these accessory cavities play in the course of all the severe forms of nasal inflammation and infection that they are reproduced *in toto*.

Until the last few years but few of the rhinologists paid any particular attention to the influence of these cavities upon rhinitis, either chronic or acute, and to the profession at large this region was a *terra incognita*.

As the author states: "As the result of anatomical and bacteriological investigations our knowledge has materially increased regarding the causes of the purulent diseases of the accessory sinuses of the nose. * * * In exactly what way infectious diseases superinduce disorders of the accessory cavities is not clearly understood. Judging from the information at hand it seems probable that an infectious disease only creates an exaggerated disposition for inflammation which becomes aggravated through the presence of some form of bacteria previously existing under normal conditions of the nasal fossa."

The author inclines, with Zuckerkandl and others, towards the acceptance of the idea of nasal origin of the inflammatory conditions of the various sinuses.

The treatment advocated is, of course, re-establishment of the natural communication between the cavity affected and the nasal fossa, with its resultant drainage, where such is anatomically possible, and such local and constitutional treatment as may be indicated. Very often it is necessary to resort to surgical procedure, and then it is that the study of such plates as are here reproduced will be found of great value.

Many brilliant results have been reported from operative procedures in empyema of the accessory cavities: results that have added greatly to the local or national reputation of the operator and conduced, in no small way, to a plethora of the pocket book. In many of these cases a careful study of the symptoms present, at the time of operation, and after operation lead one to believe that a proper handling of local applications to the nasal mucosa, with a proper understanding of the anatomical and physiological relationship of the parts would have obviated the necessity of any operative procedure. It is true, the relief would not have been so instantaneous, if one might use such an expression, but it is equally true that the result attained would have been better for the patient in many cases.

In these days of frequent and early operative procedure it is not uncommon to find patients reporting for treatment for amelioration of results of too extensive or ill-advised surgical interference. Much of which would have been avoided had the physician thoroughly understood his anatomy. In fact, so important, is the thorough knowledge of the relationship of these cavities that no rhinologist's education should be considered at all complete until he has made numerous sections of the head through its various planes.

RUMBOLD.

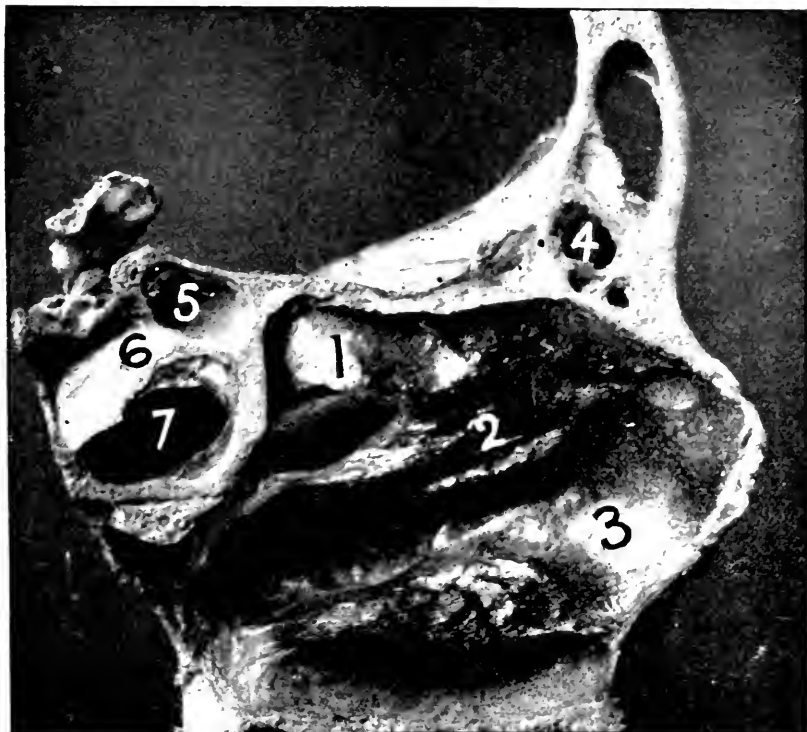


PLATE 1. An osseous preparation of a nasal fossa (1) Superior turbinate, (2) middle turbinate; (3) inferior turbinate. At (4) frontal sinus and (5 and 6) sphenoidal sinus with osseous partition (6).

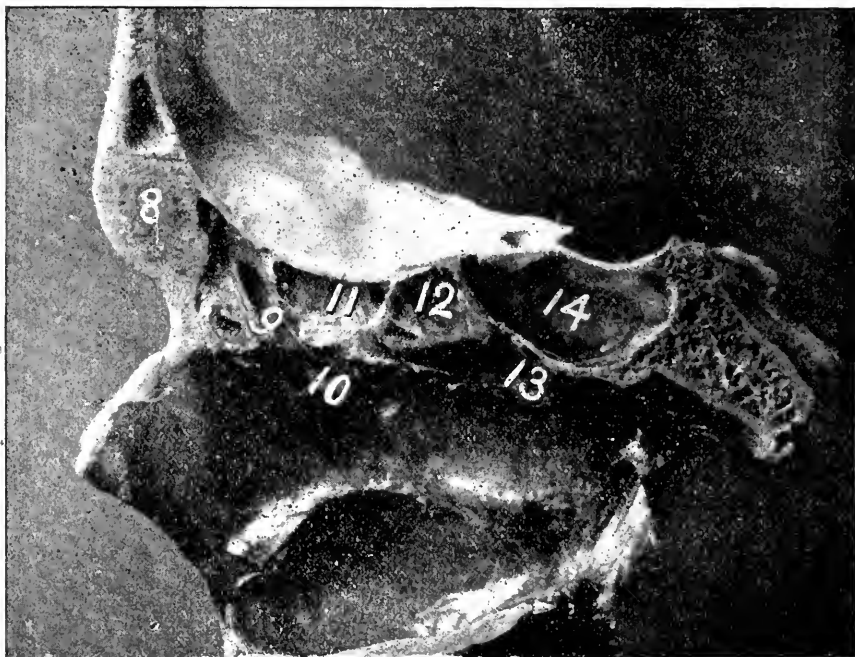


PLATE 2. Represents an osseous preparation in which the turbinated bodies have been removed, showing (8) frontal sinus obliterated; (9) infundibulum; (10) hiatus semilunaris; (11) anterior ethmoidal cell; (12) posterior ethmoidal cell; (13) recessus sphenoidalis and (14) sphenoidal sinus.

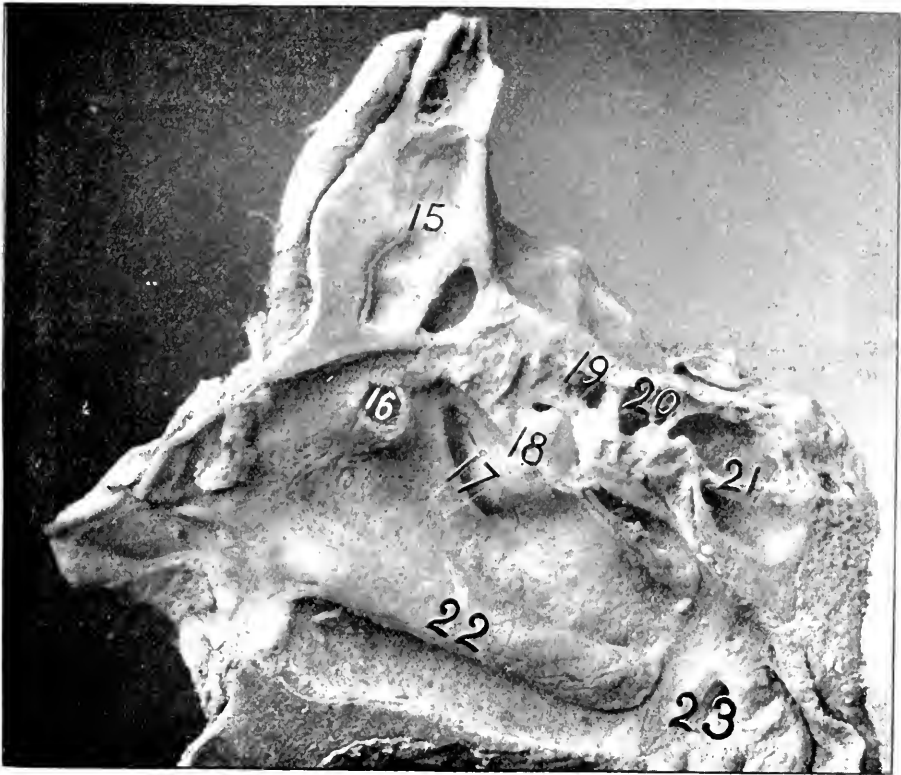


PLATE 3. Wet preparations in which middle and upper turbinates have been removed; showing (15) frontal sinus septum; (16) infundibular cell; (17) hiatus semilunaris; (18) bulla above which is the opening of anterior ethmoidal cells; (19) anterior ethmoidal cells; (20) posterior ethmoidal cells; (21) sphenoidal sinus with septal partition; (22) inferior turbinate; (23) eustachian orifice.

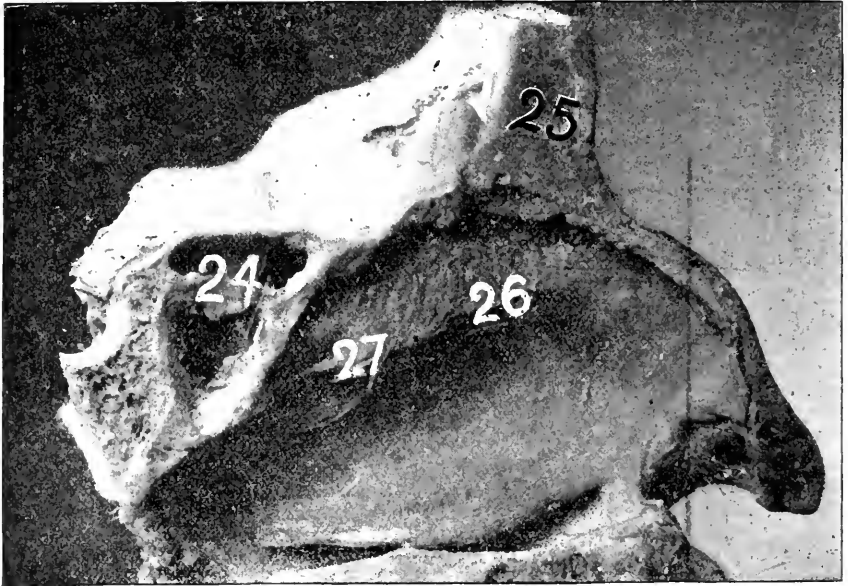


PLATE 4. Wet preparation; middle turbinate removed; (25) defective frontal sinus; (26) hiatus semilunaris; (27) position of opening of posterior ethmoidal cells; (24) sphenoidal sinus divided by septum into an upper and a lower cavity.

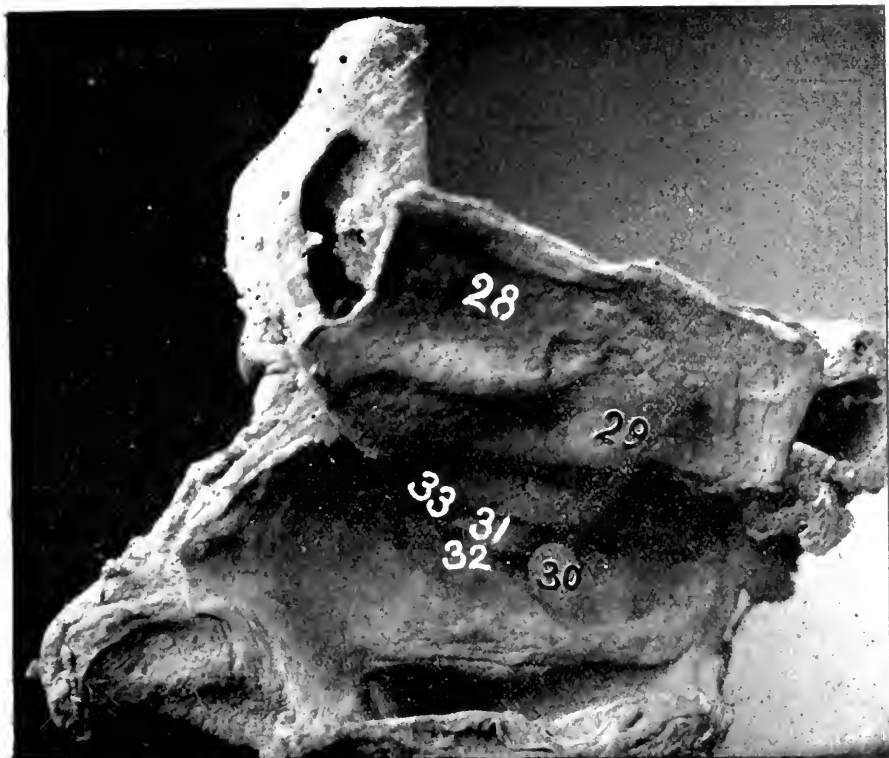


PLATE 5. Represents a preparation in which the septum (28) is detached from its palatine attachment and turned up, showing (33) hiatus semilunaris and infundibulum; (32) uncinat process; (31) bulla ethmoidalis; (30) accessory ostium maxillare abnormally large; (29) shows atrophy of the septum due to pressure.

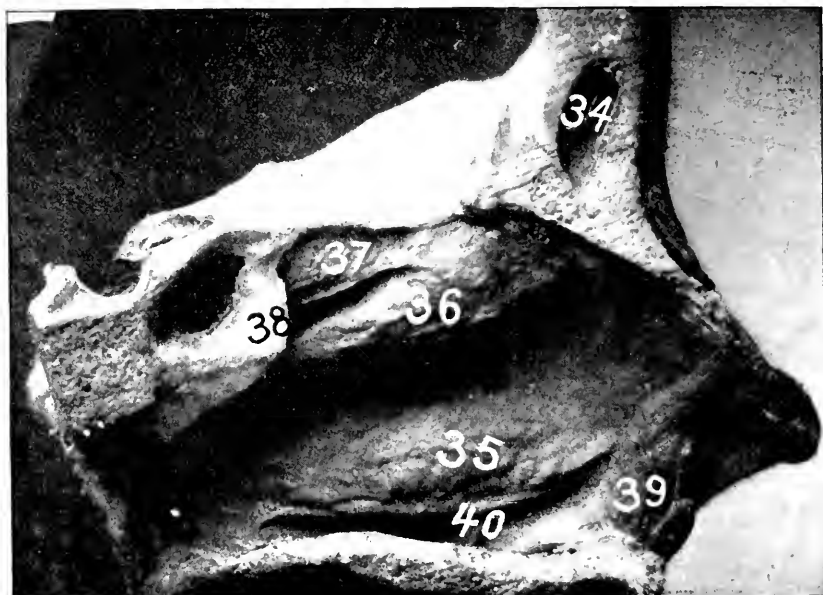


PLATE 6. Represents a normal outer wall of a nasal fossa; (35, 36 & 37) turbinated bodies; (34) frontal sinus; (38) recessus sphenoidalis; (39) entrance of lower meatus; (40) position of nasal duct.

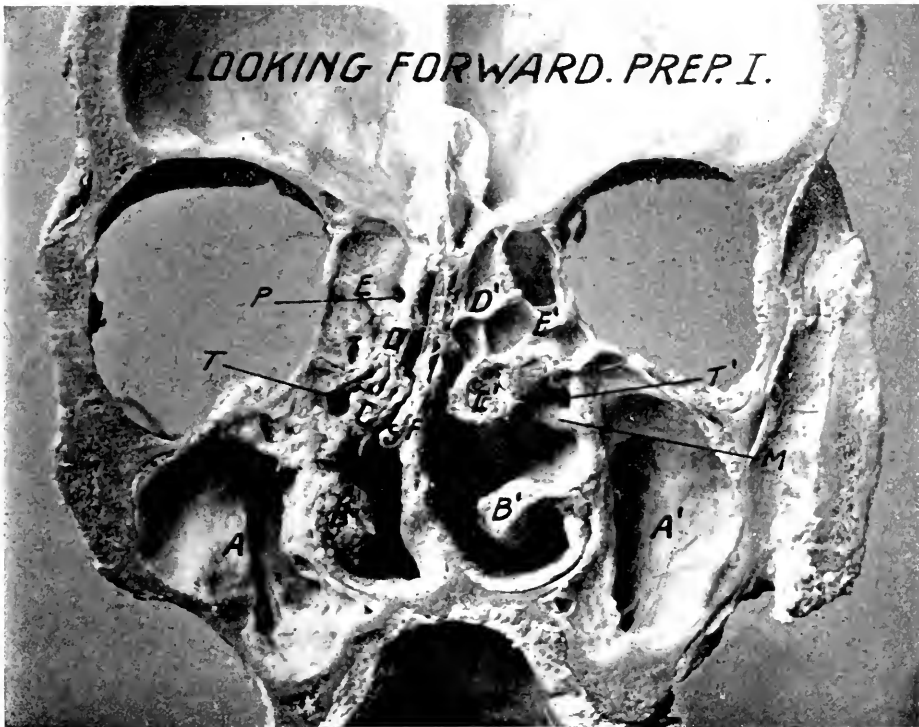


PLATE 7. A and A' antrum of Highmore; B and B' inferior turbinate; C and C' middle turbinate; D and D' superior turbinate; E and E' septa of anterior ethmoidal cells; F septum nasi — showing marked deviation; P opening to anterior ethmoidal cell; T and T' hiatus semilunaris; M bulla ethmoidalis and S septal spur or exostosis.



PLATE 8. A and A' antrum of Highmore; A'' and A''' — showing rudimentary septa of the antral cavity; B and B' inferior turbinate; C and C' middle turbinate; D and D' superior turbinate; E and E' sphenoidal sinus; F septum nasi; G inner wall of antrum and H opening of antrum.



PLATE 9. A and A' antrum of Highmore; B and B' inferior turbinate; C and C' middle turbinate; D and D' superior turbinate; X frontal sinus; K and K' alveolar process, and F septum nasi.



PLATE 10. A and A' antrum of Highmore; B and B' inferior turbinate; C and C' middle turbinate; E and E' posterior ethmoidal cells; I, septum; F septum nasi; S septal exostosis; G crista galli; and K and K' alveolar process.

This preparation illustrates in an interesting way the variability in extent of the antral cavities and also shows how the thickness of the alveolar process (K and K') of one antrum in the same subject may differ from that in the other.



PLATE 11. A and A' antrum of Highmore; B and B' inferior turbinate; C and C' middle turbinate; D and D' superior turbinate; E and E' sphenoidal sinus; F septum nasi; G crista galli; and H intra-nasal wall of antrum of Highmore.

This plate represents a wet-preparation in which the intra-nasal structures are about normal so far as their anatomical construction and relationship are concerned. The antral cavities (A and A') vary in size.

General Consideration of Mucous Membranes of the Upper Respiratory Tract—D. BRADEN KYLE, Philadelphia—*International Medical Magazine*, January, 1899.

The mucous membranes of the respiratory tract or elsewhere are influenced directly by local irritants, or the local irritation may be due to some constitutional diathesis. These facts necessitate a thorough knowledge, not only of the histology and pathology of the mucous membrane, as well as of the adjacent and allied structures, but also of remote organs which, through their deficient or perverted functions, may produce secondary lesions of the mucous membrane. The rational treatment of diseases of the upper respiratory tract, then, involves a knowledge not only of special structures, but of the entire body, the peculiar interrelation of the individual parts, and especially the peculiarities of individuals.

Mucous membranes are supported entirely by underlying connective tissue, on the character of which the membrane's function and its resistance to disease largely depend. If this structure be fixed, as it is in the nose and upper air tract, by bony or cartilaginous framework, when the mucous membrane is engorged or inflamed, the distension must of necessity be in the direction of the cavity which it lines, thus encroaching upon the lumen of this cavity.

Inflammatory processes of the mucous membranes rapidly pass into the exudative stage. Any interference with the systemic circulation, either arterial or venous, in which the blood is either actively or passively in excess in the tissue, may bring about almost the same clinical phenomena as are observed in an acute inflammation. The prognosis and treatment would be vastly different in the two conditions.

On account of faulty elimination, irritating material may be found in the blood, and the mucous membrane being a dependent and sensitive structure, will very soon show the effects of such irritants. This is especially seen in the gouty and rheumatic diathesis. In such cases how useless it would be to treat the local symptoms without correcting the faulty elimination. (To be continued.)

McLEAN.

Prophylaxis in Diseases of the Nose and Throat—J. HOMER COULTER—*The Chicago Clinic*, January, 1899.

Coulter sums up his article as follows: "Anything which produces an alteration in the normal physiological metabolism in the mucous membrane of the nose and throat: any alteration in the nutrition of the parts: any abnormal variation in functional activity, or any considerable change in the histological anatomy, are each and all remedial, surgically or otherwise, and are therefore amenable to our prophylactic efforts in behalf of our nose and throat patients."

McLEAN.

On the Shape of the Facial Bones, Etiology and Therapy of Congenital Stenosis of the Choanæ—HEINRICH HAAG—*Archiv für Laryngologie*. Band ix. Heft 1. 1899.

This very interesting paper gives the history of three cases of congenital stenosis of the choanæ, together with most complete and careful data in regard to the condition of the mouth, nose and ear.

A most admirable table of sixty-eight cases of choanal atresia is given. Of these twenty were bilateral. In a large proportion of the cases there was present a very highly arched condition of the hard palate. The view held by many that this high arch is caused by mouth-breathing is controverted by the author, who contends that it is the result of embryological defect, caused probably by the same forces that produced the bony diaphragm occluding the nostrils.

Contrary to what might be expected, there was an extreme widening of the nostrils in many cases. The face is of the long and narrow type. In those cases, however, where the palate was not markedly arched the face was broad. As to the embryological details of the genesis of the condition, opinions vary widely. Some regard the cases as somewhat analagous to the arhinencephalous monsters. The author, however, agrees with Hochstatter in regarding the diaphragm as a persistent membrana naso-buccalis which has been pushed backward in the course of fetal development. The bony framework of the lower turbinal body was small and delicate in all the author's cases. The anosmia which was invariably present, disappeared after operation in his own cases, but this is not the experience of all operators.

Finally it may be stated that the hearing seemed not to be at all affected by the stenosis.

At the time of the operation it was discovered that in all of the author's cases the diaphragm was in part membranous. The bony part was removed with a chisel and sickle-shaped knife. To prevent injury to the posterior pharyngeal wall, the operator's finger was introduced into the post-nasal space during the cutting. In several cases, where the opening showed a tendency to close after a longer or shorter period of time, the removal of the lower portion of the posterior edge of the septum obviated the difficulty.

VITTUM.

Deformities of the Septum Narium; their Classification with a View to Treatment—W. E. CASSELBERRY, Chicago—*Journal Am. Med. Assoc.*, March 4, 1899.

The author divides the subject into:

1. Excrescence or spur of the septum. Cartilaginous spur. Mixed cartilaginous and bony spur. Bony spur.
2. Deviation of the septum. Cartilaginous deviation. Mixed cartilaginous and bony deviation. Bony deviation.
3. Combined excrescence and deviation of the septum.

In the treatment the author rehearses the usual methods in vogue for such deformities.

STEIN.

A Contribution to the Histology of the Cartilaginous Septum with Special Reference to Habitual Nosebleed—ZACHARIAS DONOGANY—*Arch. für Laryngologie*, Band ix, Heft 1, 1899.

The researches undertaken by Donogany were made upon a hundred cartilaginous septa removed by him for that purpose. These embraced both normal and pathological specimens. His attention was particularly given to the structure of the septum in the region of Kiesselbach's point, where the pavement epithelium ends and the ciliated epithelium begins.

The gist of his conclusions is this: That underlying all soft structures and resting upon the cartilage itself is a network of large blood vessels which may be likened to the corpus cavernosum. In atrophic condition of the septum the cartilage and the epithelium disappear, leaving the latter resting upon the perichondrium. Under these circumstances the network of large blood vessels is protected only by the layer of epithelium, and is necessarily exposed to mechanical insults from without (digging with the finger nail, etc.). We have here all the conditions which are necessary for the production of habitual nosebleed. VITTUM.

Nasal Obstruction and Ear Affections—MAYO COLLIER—*Lancet*, October 15, 1898.

The article gives an explanation of the manner in which nasal obstruction affects the Eustachian tubes. The importance of treating nasal obstruction and the accompanying catarrh is pointed out as a necessary first step in the majority of aural affections.

STCLAIR THOMSON.

Congenital Atresia of the Choanæ—R. KAYSER—*Wiener Klin. Rundschau*, March 12, 1899.

Kayser relates a case of unilateral atresia and makes some remarks on the condition in general, but offers nothing particularly new. VITTUM.

Nasal Disease as the Cause of Chronic Disturbance of the Lachrymal Duct—BENJAMIN RISCHAWY—*Wiener Klin. Wochenschr.*, March 16, 1899.

In this paper the author continues the report of his investigations as to the relationship between middle turbinal enlargements and lachrymal obstruction, which he began at a meeting of the Vienna Laryngological Society held February 9. In this paper he adds the histories of thirteen cases. While it is generally conceded that hypertrophy of the lower turbinal or any cause which tends to fill up the lower meatus may result in obstructing the mouth of the lachrymal duct, yet the author wishes to emphasize his view that middle turbinal troubles may also obstruct the canal by direct pressure in the course of its passage through the upper part of the nasal walls. VITTUM.

The Relation between Chronic Disease of the Lachrymal Duct and Nasal Disease—BENJAMIN RISCHAWY—*Wiener Klin. Rundschau*, February 19, 1899.

The author's attention has been drawn to the fact that in many cases of stenosis of the lachrymal duct there is also present a hypertrophy of the middle turbinal. He at first thought this mere coincidence; but, having occasion to remove the anterior extremity of the middle turbinal in one of these cases, he found, to his surprise, that the stenosis of the lachrymal duct was very much relieved. This led him to investigate carefully the anatomical relations existing between the two structures. He found that at the junction of the turbinal and lachrymal bones, as well as at other points along the duct wall, there were frequently present gaps where the bones did not fit closely into each other. Also that where the entire wall is intact it is so thin that compression of the duct is easily occasioned by a hypertrophied middle turbinal. He advises, therefore, that in many cases of stenosis of the duct, removal of the middle turbinal should be practiced as a preliminary operation before the case passes into the hands of the oculist.

VITUM.

Lupus of the Nose—WYATT WINGKAMP—*Jour. L., R., & O.*, March, 1899.

Symptoms of nasal obstruction with discharge of five years' duration were complained of by the patient, a female, aged thirty-one years. The nasal fossae were found occupied by granulations, which extended as high as the middle turbinals. The cartilaginous septum was perforated and there was some evidence of old pathological changes in the soft palate. No specific history could be elicited. Examination showed no bacilli, but presented the usual features of lupus.

LEDERMAN.

Primary Tuberculosis of the Skin of the Nose—EDWARD W. SHIELDS, Cincinnati—*Cincinnati Lancet-Clinic*, March 25, 1899.

No microscopic examination of the lesion had been made, but clinically it presented all the features of a typical case of nasal tuberculosis.

STEIN.

Pathology and Diagnosis of Nasal Tuberculosis—MAX GOERKE—*Archiv fuer Laryngologie*, Band ix, Heft 1, 1899.

The author gives an exhaustive description of the histology of a tumor which was removed from the cartilaginous septum. The conditions seem not unusual until the description of the giant cells is reached. These bodies contained large numbers of nuclei, but the interesting peculiarity is the presence of certain bodies in the protoplasm of the cells. These bodies were surrounded by a clear zone between them and the protoplasm. The nuclei of a giant cell having such an occupant, were driven up to one side away from the intruder. These bodies were at times seen lying partly

within and partly without a giant cell. At other times they could be seen lying among the lymphoid cells, and free from the giant cells. In size they varied markedly. Some were no larger than the nuclei of the giant cells, while others were so large as to occupy fully one-half the cell. In shape they are described as being round, oval, dumb-bell shaped, trefoil shaped and ribbon-like.

After giving many references to these bodies, the author concludes from various tests that they are products of degeneration, probably originating from the blood vessels.

The author strenuously urges that, in nasal tumors, the actual presence of bacilli in the tissues be demonstrated before settling definitely upon a diagnosis of nasal tuberculosis. His reason is that even the histological picture of tuberculosis may be deceptive. Giant cells are found in other conditions, granuloma, gumma, carcinoma, etc. The actual presence of tubercle bacilli, on the other hand, completes the diagnosis.

VITUM.

Case of Foreign Body in the Naso-Pharynx—G. A. FISCHER—

Austral. Med. Gazette, Vol. xviii, No. 2, February, 1899.

The patient had suffered from a very fetid discharge from the right nostril for fourteen months. Previously she had suffered from lachrymal duct trouble. About fifteen months before she was examined, a laminaria tent was inserted into the lachrymal duct, and as part only could be withdrawn again, an attempt was made to push the remaining portion down into the nose, but this did not appear to have been successful. Swelling of the turbinates prevented thorough inspection from the front, but posterior rhinoscopy revealed a thick, dark object lying across the right roof of the pharynx, one end of which was evidently in the right Rosenmüller's fossa. It was removed with a snare, and found to be a thick, swollen piece of sea tangle. Another large piece was dislodged from beneath the right inferior turbinate.

EATON.

Partial and Total Rhinoplasty—JOS. PREINDLSBERGER—*Wiener*

Klin. Wochenschr., February 9, 1899.

The author reports two cases with fairly good results. Nothing especially new.

VITUM.

A Contribution to the Study of Rhinoliths—F. MEYER—*Archiv*

fuer Laryngologie, Band viii, Heft 1, 1899.

The paper opens with the history of a case which shows nothing of especial importance, except that it is expressly stated that there were no evidences of a gouty disposition. The author then goes at once to theorizing about the cause of rhinoliths in general. He gives a brief review of the literature of the subject, but is not fully satisfied with any of the explanations which have been advanced. He therefore is inclined to think that in addition to the presence of some foreign body in the nostril and in addition to a personal peculiarity, there must be some chemical explanation of this rather uncommon condition. He recalls to our mind the action of super-

saturated solutions of certain salts. How the merest jarring will transform a previously clear solution into a mass of crystals. His reasoning is, that under certain conditions the nasal secretion may really be supersaturated with calcium salts, so that on coming in contact with a foreign body, be it ever so small, crystallization takes place, and here we have the foundation of a rhinolith. Of course we have only to imagine this process repeated a sufficient number of times to produce a concretion of any size. As tending to strengthen his theory of supersaturated secretions, the author cites the well-known deposition of calcium salts in the tympanic cavity.

VITTM.

II. MOUTH AND NASO-PHARYNX.

The Histology and Pathological Anatomy of the Mucous Membrane of the Throat WM. E. McVEA—*Med. Monograph*, Vol. i, No. 2, February, 1899.

The design of the author is to give a "short review of the histological structure of these membranes, and of the general pathology of their affections, to facilitate in the mind of the reader the application of some general principles to special disease. * * * Especially the variation of histologic elements, according to the location and function of the membrane." The subject is well presented and instructive.

EATON.

Pemphigus and Essential Contraction of the Connective Tissue
—THOST—*Deutsche Med. Wochenschr.*, Feb. 9, 1899.

At a meeting of the Association of Physicians of Hamburg, during a discussion of Franke's paper on the above subject, Thost said that this form of chronic inflammation of the connective tissue was of equal interest to laryngologists and otologists. The inflammatory process in the nose, pharynx and larynx led first to the formation of shallow blebs filled with a greenish serous fluid. These blebs burst during the act of swallowing, and leave a little patch of shrivelled membrane. Upon removing this macerated membrane the bleeding cutis is laid bare. Rapid healing without a scar follows. At the same time inflammatory processes are developed deep in the mucous membrane, which lead to narrowing of the lymph channels and produce false membranes on the surface which resemble butterfly wings. These are especially noticeable on the pillars of the fauces and on the epiglottis. Synechia form between the septum and the turbinal bodies; also thickenings on the epiglottis and uvula which may resemble tuberculous processes. As in the eye the process shows peculiar malignancy and ends in blindness, so in the larynx many cases of suffocation have been observed. In chronic pemphigus the following may be noticed: The external skin is never involved; no fever; the process generally lasts for years in elderly persons; all treatment is useless.

VITTM.

The Shape of the Hard Palate and its Functions as a Resonator—E. N. MALJUTIN—*Archiv fuer Laryngologie*, Band ix, Heft 1, 1899.

The author having undertaken an investigation into the differences which exist in the form of the vocal organs between those who can and those who cannot sing, was struck by the very marked difference in the shape of the hard palate. He therefore undertook a series of measurements made from plaster casts of the mouths of numerous singers. In a general way it may be stated that all those who are able to sing well are possessed of a deeply arched palate. The other measurements may vary according to the character of the voice, but all possess this high arching dome, which Maljutin is inclined to regard as the most important part of the resonance-producing mechanism.

VITTUM.

The Development of Cleft Palate—JUL. TANDLER—*Wiener Klin. Wochenschr.*, February 16, 1899.

A short time ago Fein advanced the theory that cleft palate is caused by the development of adenoid tissue in the vault of the pharynx, which, increasing to an unusual extent, projects between the approaching segments of the palate and prevents their union. The present paper was written to controvert that view. T. cites numerous authorities to show that adenoid tissue is first developed at about the fifth month while the union of the two halves of the palate is completed during the third. He also cites his own observations during his extensive anatomical researches.

His own view is the commonly accepted one, that the tongue is the body which is interposed between the two approaching segments. This view is strengthened by some anatomical specimens which he has obtained, cuts of which are given. The author gives Fein credit for having drawn attention to the very common presence of adenoids in cases of cleft palate, but is inclined to reverse the causal relationship.

VITTUM.

Adenoid Vegetations; How and when shall we Operate for Them?

—EMIL MAYER, New York—*Journal Am. Med. Assoc.*, March 4, 1899.

The author depreciates the employment of chloroform as an anesthetic. In certain instances he operates without any anesthetic. As a rule, however, complete anesthesia is requisite. He finds satisfaction in the use of the Schleich mixture No. 1, composed of

Chloroform	45 c. c.
Petrolie ether	15 c. c.
Sulphuric ether	180 c. c.

Preferable time for operating is the early morning hour. Preferable place is in the hospital. The anesthetic is administered drop by drop. First forceps are used, followed by a smaller pair. Then the curette, followed by forceps and finally the finger. Patient should be kept in bed twenty-four hours.

STEIN.

Chronic Pharyngitis and Chronic Naso-Pharyngitis—Treatment other than Local—T. J. HARRIS—*See Pharyngitis*, May 1899.

Attention is called to (1) causes of a general nature; (2) to constitutional dyscrasias—rheumatism, gout and anemia; (3) to gastro-intestinal disease.

Medication for the above indications must be administered.

For the digestive disturbance, the use of a laxative mineral water is serviceable. In gastric sore throat, Harstord's Acid Phosphate has been recommended. Local treatment, however, is not to be omitted. LUDERHANS.

Inflammation of the Fauical Tonsil—J. E. SWEET—*Med. Monograph*, Vol. 1, No. 2, February, 1899.

Contains nothing new.

EATON.

Acute Anginas due to the Bacillus of Friedlaender—NICOLLE AND HEBERT—*La Normandie Med.*, October 15, 1898.

The development of anginas with false membrane is not limited to one micro-organism alone. The bacillus of Friedlaender, for instance, which was first reported by Max Stross, in 1865, in the throat of a patient with acute angina, increases the number of the various micro-organisms which may cause inflammation of the tonsils and velum palati. All the earlier reports refer to chronic cases, but four recent cases of the acute form have been described.

SCHIFFEGRELL.

A Case of Septicæmia Originating in the Pharyngeal Tonsil

MACHOU—*Deutsche Med. Wochenschr.*, March 16, 1899.

The author describes a well marked case of septicæmia, and is inclined to attribute the trouble to a chronic inflammation and infection of the pharyngeal tonsil. He arrives at this diagnosis by exclusion. VITTHAL.

Pharyngeal Adenoids—EDW. PYNCHON—*Med. Monograph*, Vol. 1, No. 2, February, 1899.

A clear and able presentation of the subject. Illustrative cuts of the "V-shaped dental arch," with and without protruding canine teeth are given. The curette of Gottstein is the favorite instrument with the largest number of operators, though its exclusive use has been criticised by others. The author also presents an illustration of a curette of his own device, the principal feature of which is that the side pieces are parallel for two-thirds of the way down, and thus far each is provided with an inner cutting edge. "The side blades can never cut when the top blade is being used, and when either side blade is in use neither its mate nor the top blade can do damage." The method of using cutting forceps is also described, which the author considers seldom required in children under five. The danger of hemorrhage is greater, he thinks, after the use of forceps than after the curette. EATON.

Gumma of the Tongue—WM. S. GOTTHEIL. *International Med. Magazine*, December, 1898.

The author records a case of gummous glossitis in a young female adult, showing an elongated tumor occupying the central area of the anterior part of the tongue measuring one and a half inches in length by three-quarter inches in breadth. The edges and base of the tumor are moderately hard and infiltrated, but no characteristic sclerosis existed. The central part of the tumor was occupied by a ragged deep longitudinal ulceration, covered apparently with florid granulations. The submaxillary glands were



Gumma of the Tongue.

hard and swollen. The tumor had commenced as a simple lump eight weeks before, and had steadily increased in size. The exact time in which ulceration had begun could not be determined. There was no pain and the patient complained only of the discomfort caused by the presence of the tumor in her mouth.

No evidences of past or present syphilis were then nowhere and this with the age of the patient (twenty-four years), her robust health, the fact that she was a modest girl, had been recently married to an apparently healthy husband, seemed to exclude tertiary syphilis. Cancer could be excluded from her age and sex. Primary tuberculosis was excluded from the appearance and course of the

ulceration and the normal condition of her lungs, larynx and general system. The diagnosis lay between ulcerated initial lesion and the softened gumma.

The patient was kept under constant observation, the ulceration increased slowly but steadily in size, the mass became somewhat softer. Eleven weeks after the appearance of the tumor not a single secondary manifestation had shown itself. The diagnosis of the gumma was made and under anti-specific treatment (iodide of potassium, 90 grains, together with small doses of mercury) the tumor rapidly decreased in size, the ulceration healed and three weeks later hardly a trace of the original induration in the tongue could be found and the tumorified glands were reduced to one-half their former size.

The interesting point in this case apart from the comparative rarity of the affection is the presence of tertiary lesion in a patient so young and presenting not the slightest evidence luetic infection. It has an additional argument, if one were needed, that of the absolute necessity of making the diagnosis in syphilis as in ordinary dermal affections from the objective symptoms alone and absolutely disregarding the anamnesis.

GOLDSTEIN.

Adenoid Growths; their Relation to Deaf-Mutism: Reports of Cases—A. C. GETCHELL, Worcester, Mass. *Journal Am. Med. Assoc.*, March 4, 1899.

Three deaf-mute children were operated on for the removal of adenoid growths. One improved, the other two did not.

From the study of the literature, the writer is of the opinion that the pathologic lesion in every case of deaf-mutism is in the internal ear and that the operation for adenoids or tonsils can be of little material help to the improvement in hearing. But in order to improve the general health of the child, and where there is any probability that the adenoids contribute to the deafness, they should be removed.

STEIN.

The Relation of Adenoids to Tuberculosis—O. BRIEGER—*Deutsch. Med. Wochenschr.*, March 16, 1899.

At a meeting of the Medical Section of the "Schlessigen Gesellschaft für Vaterländische Cultur," held January 13, Brieger said that in a small proportion of cases tuberculosis could be definitely detected in adenoid vegetations. In a measure he makes this condition responsible for lupus of the nose, and tuberculosis of the middle ear. Ulcerative processes do not usually appear in the adenoids themselves, because the disease is not on the surface, and any pus producing germs that may become located on the parts are destroyed by wandering lymphocytes.

VITTEUM.

Adenoid Vegetations in the Naso-Pharynx—JOHN O. McREYNOLDS, Dallas, Texas—*Journal Am. Med. Assoc.*, March 4, 1899.

The index finger is preferred for doing the operation, and without any anesthetic.

STEIN.

A Rare Case of Chancre—ORVILLE HORWITZ, Philadelphia—*Dun-
gison's C. and C. Record*, Feb. 15, 1899.

The case was that of a young man, twenty-one years of age, who noticed a pimple on the tip of his tongue six months before being seen by the author. Two months after, his throat became sore, and his voice hoarse. The patient was anemic and had lost weight. A superficial ulceration on the tongue was seen, with enlargement of the glands in the side and back of the neck. The young man was in the habit of frequently kissing prostitutes. A diagnosis of chancre of the tongue with syphilitic lesions of the larynx was made.

LEDERMAN.

**Superficial Lymph-Angioma of the Tongue Presenting the Papil-
lary Form**—VOITURIEZ—*Journ. des Science Méd. de Lille*,
December, 1898.

The patient was a youth of sixteen years who had had a tumor since he was nine years of age. It was situated on the dorsum of the tongue, was sessile and measured two centimeters in width and four in length. There was no hemorrhage or submaxillary adenitis. It was removed and the patient appeared cured in eight days.

SCHEPPEGRELL.

III. ACCESSORY SINUSES.

Headache in Disease of the Nose and its Accessory Cavities—

M. HAJAK—*Wiener Klin. Wochenschr.*, March 9, 1899.

At a meeting of the Vienna Medical Club, held on February 22, Hajak read a paper on the above subject. He states that two conditions are apt to produce headache, disease of the accessory cavities and certain forms of nasal hypertrophy. The attempt to classify the different forms of headache seems nearly a failure, as almost any form of headache may appear as a concomitant of almost any form of nasal or sinus trouble. As a general rule, however, it may be stated that the unilateral and neuralgic headaches follow chronic empyema of some sinus. The nasal hypertrophies do not usually give rise to headache. An apparent exception to this is where the process affects the tuberculum septi. Particularly is this true if a hypertrophy of the middle turbinal co-exists, thus shutting off the olfactory fissure.

VITTUM.

Diagnosis of Frontal Empyema—GOULY—*Archiv. Int. de Laryn-
gol., etc.*, October, 1898.

We may almost positively diagnose the existence of frontal empyema when, our attention having been attracted to a possible sup-puration in that region by the painful symptoms of which the patient complains, the rhinoscopic examination of the nasal fossa, first freed of any obstruction which may exist, demonstrates pus in the middle meatus, and when in addition to these points we can add the result of electric transillumination.

SCHEPPEGRELL.

Acute Inflammation of the Antrum of Highmore—FOUCHER—*L'Union Médicale du Canada*, Vol. iv, No. 3.

The writer describes this condition as characterized by periorbital pain, sufficiently severe to cause loss of sleep, radiating throughout the side of the head affected, and increased by pressure with the finger over the canine fossa, by blepharospasm and lachrymation. The secretion is clear, yellowish, like melted butter. At first the secretion is retained in the cavity by the swelling of the nasal mucous membrane, later on, it becomes yellowish white and of a stale odor. When the acute inflammation is the result of dental caries, the secretion is not retained, and is often purulent, while the odor is apparent to the patient. Twelve cases are detailed. Diagnosis in each was verified by transillumination (after Hering) with a lamp of from 7 to 20 volts, giving 5 to 20 candle power. A greater voltage was used than that for which the lamp was intended, so as to obtain a maximum of light with a minimum of bulb in the lamp.

In blonde patients, the young, and females generally, from 5 to 6 candle power sufficed. When the bony walls were more strongly developed, 10 to 20 candle power was required. All secretions were removed prior to examination, and when the nasal tissues were engorged, this was reduced by cocaine. The treatment pursued in the catarrhal cases was to pass a tampon moistened by cocaine (4 per cent) into the affected nostril, withdraw it in a minute or so, hang the head well forward and to the more affected side, and then to blow the affected nostril vigorously. The patient was further instructed to practice lowering the air pressure in the affected air sinus by inspiring vigorously, after shutting the mouth and closing the nostrils.

GILF WISHART.

Suppurative Diseases of the Accessory Sinuses of the Nose—W.M.W. BLISS—*Denver Med. Times*, Vol. xviii, No. 8, February, 1899.

Authorities seemed to be about equally divided as to the origin of antrum trouble, some believing the teeth to be the most common cause, others the nose. Dr. D. M. Fletcher is quoted as stating that after examining 500 crania, he found that out of 252 cases of abscessed upper molars, only 12 perforated the antrum, and that it is his belief that intra-nasal disease is the main cause. The difficulty of diagnosing suppuration of the frontal and ethmoidal sinuses is noted and the methods described.

EATON.

The Maxillary Sinus; Chronic Empyema thereof; Its Treatment—J. A. STUCKY, Lexington, Ky. *Journal Am. Med. Assoc.*, March 4, 1899.

Dental caries is the most frequent cause. Aside from this, causes originating in the nose are of importance, as atrophic rhinitis or ozena, nasal polypi and enlarged middle turbinate.

In the treatment first correct any possible causative condition in the nose. Next extract, if necessary the second molar tooth, and

with a Buck's mastoid drill a large opening is made through the alveolar process into the antrum. This is enlarged with a sharp spoon to admit the introduction of a speculum so the cavity can be thoroughly examined and curetted, when it is irrigated and loosely packed with iodoform gauze. This is kept up until spontaneous healing takes place by the filling up of the antrum with connective tissue. The author emphasizes the superiority of the above procedure rather than entering by way of the canine fossa. STEIN.

Ocular Complications in Frontal Sinusitis—R. SOCOS—*La Presse Méd.*, November, 1898.

Ocular complications in frontal sinusitis without other symptoms are extremely rare. In the case reported examination of the eye showed only diplopia, the cause of which was supposed to be a tumor or some irritation in the neighborhood of the orbital plate. A careful history of the case showed, however, that the patient suffered from chronic coryza and that much discharge came from the nostril each morning. This suggested the possibility of frontal complication, and an empyema of both frontal and maxillary sinuses was demonstrated. SCHEPPEGRELL.

Temporary Resection of the Superior Maxilla after Langenbeck
—JOS. PREINDLSBERGER—*Wiener Klin. Wochenschr.*, March 9, 1899.

The author begins with a general review of the different methods of removing naso-pharyngeal fibromata. He is rather inclined to oppose their removal per vias naturales, and prefers some form of operation which gives satisfactory access to the base of the tumor. Langenbeck's method of operating seems best to him, and he reports two cases operated on by him in that manner. In both instances the operation was done with the head hanging down and without a preliminary tracheotomy. VITTUM.

IV. LARYNX AND TRACHEA.

Anatomy of the Infant Larynx—DEMETRIO GALATTI—*Wiener Klin. Wochenschr.*, Feb. 16, 1899.

This paper is full of interesting details which cannot be given here, but which would well repay a perusal. The material for the studies was obtained in Zuckerkandl's Anatomical Institute and consisted of 136 larynges at different periods of development. The special anatomical peculiarities of each year of life are given up to the eleventh, when the larynx is said to approach the adult organ in form and relations. The author's general conclusions are as follows: During the first two years of life the female larynx is more fully developed than the male. From the ninth to the eleventh years the reverse obtains. As distinguishing the infant larynx from the adult the relations of the hyoid bone and the thyroid

cartilage are most prominent. The hyoid bone during the earliest years lies along the upper border of the thyroid cartilage, completely covering in its highest point. Gradually, with increasing age, the hyoid bone rises and by the sixth year the thyro-hyoid ligaments first become noticeable. A condition which is not mentioned in the literature of the subject is the backward inclination of the body of the cricoid. This is most marked at birth and disappears during the fourth year. The narrowing up of the larynx described by Bauer finds its explanation in this anatomical fact, which may also have some clinical importance.

The entrance to the ventricle of Morgagni is very small, considering the distance between the cricoid and thyroid cartilages. As a consequence of this the vocal cords as well as the rima glottidis are not only actually but relatively smaller than in the adult. The sacculus laryngis consists of an expansion of the whole lateral wall of the sinus and not of its anterior portion only, as is the case in adult life. This difference disappears during the tenth year. The narrowest point in the laryngo-tracheal canal is found at the level of the cricoid cartilage.

VITUM.

A Contribution to Our Knowledge of the Laryngeal Nerves—A.

OXODI—*Archiv für Laryngologie*, Band ix, Heft 1, 1899.

This admirable paper cannot be abstracted. In order to comprehend it the reader must follow it out in all its details, and that, too, in connection with the cuts and diagrams accompanying it. It may be stated that the study is in the direction of ascertaining the nature, course and connections of the nerves in question.

VITUM.

The Post-Mortem Examination of the Laryngeal Nerves—A.

OXODI—*Archiv für Laryngologie*, Band ix, Heft 1, 1899.

This is merely a plea for more exact and critical examination in cases where there has been some form of laryngeal paralysis. The usual method is to examine the muscles and the nerve trunks; whereas Oxodi thinks that an autopsy, to be of any scientific value, should involve an examination of the peripheral twigs as they are given off to each muscle. Further, he says that careful attention should be given to the fibers connecting the recurrens with the sympathetic and with the cardiac branches.

VITUM.

Artificial Larynx—GLUCK—*Berliner Klin. Wochenschr.*, March 6, 1899.

At a meeting of the Berlin Medical Society held February 15, Gluck demonstrated the usefulness of a phonating apparatus devised by himself. He first spoke of those instances where all communication between the trachea and the pharynx is lost. In several of these cases there has been retained the ability to speak in a whisper. Gluck explains this by saying that the muscles of the pharynx contract in such a way as to throw up folds of mucous membranes on each side which vibrate imperfectly under the in-

fluence of a current of air. The patient learns by experience to take air into the mouth and pharynx and expel it for this purpose, in much the same way that glassblowers drive a column of air into the material upon which they are working. Latterly, Gluck says he has, in cases of laryngotomy, made a preliminary low amputation of the trachea and sewed the lower end all around into the skin. This cuts off absolutely all communication between the trachea and pharynx, completely obviating the possibility of inspiration pneumonia. In the case demonstrated it had been necessary to remove not only the larynx, but also masses of infiltrated glands and parts of the lateral pharyngeal walls. The gap was filled in by a double skin flap, one cutaneous surface being turned inside. The patient was able to swallow well, but of course was completely voiceless. Gluck then devised an apparatus consisting of a tube which passed from the tracheal opening into the nose. Here it communicated with a small olive placed in the nostril. This olive contained a reed for phonating purposes. From the other end of the olive a rubber tube passed backward to about the lower end of the uvula.

The current of air from the tracheal opening passes up to the reed in the nasal cavity, where it is broken up into sound waves which are passed on through the second tube into the mouth and pharynx. Here they can be broken up and manipulated as in the ordinary processes of articulation. The result is that the patient can speak clearly and in a good loud voice. In conclusion, Gluck reports that in his last series of twenty-six cases of carcinoma of the larynx, he has had twenty-three cures; the best result, perhaps, which has hitherto been reported in this class of cases.

VITUM.

Development of the Sinus of Morgagni—DAVID HANSEMAN—

Archiv fuer Laryngologie, Band ix, Heft 1, 1899.

This careful and scientific investigation of the above subject does not lend itself to abstracting. It should be read in the original by those interested.

VITUM.

Purulent Inflammation of the Glosso=Epiglottic Fossa—W.

ZUBLINSKI—*Deutsche Med. Wochenschr.*, February 23, 1899.

The author gives his experience with this somewhat uncommon affection. He has met with three cases. The etiology is obscure. Perhaps the ingestion of too hot fluids. In one case it could be pretty clearly traced to a wound caused by a fish-bone. The symptoms are such as we might expect from an abscess in this region, dysphagia, dryness, increased salivary and mucous secretion. The tongue itself is not painful, but movements thereof are extremely disagreeable. The laryngeal mirror is absolutely necessary to a diagnosis. There is generally some slight edema of the free edge of the epiglottis, but the swelling does not pass over into the larynx proper. The swelling of the abscess itself, however, may increase to such a degree that the epiglottis is very strongly pressed down over the larynx, producing dangerous dyspnea. Incision promptly relieved all symptoms and rapid healing followed.

VITUM.

Rheumatic Arthritis of the Cricoid=Arytenoid Articulation—

ALEXANDER BAUKOWICZ *Archiv. fuer Laryngologie*, Band ix, Heft 1, 1899.

Merely a review of the literature of the subject, with a report of a case. The only conclusion drawn seems to be that this trouble may be the first symptom in a case of general rheumatoid arthritis.

VITUM.

A Case of Double Prolapse of the Ventricles of Morgagni Cured by Excision—LIKHWITZ *Archiv. Int. de Laryngol., etc.*, October, 1898.

The author considers prolapse of the ventricles any hyperplastic inflammation of the mucous membrane of the ventricles, which may be seen by means of the laryngoscope. In the case reported the mucous membrane of both ventricles covered the vocal cords. A histologic examination of the fragments removed showed neither necrosis nor giant cells.

SCHIEFFEGRELL.

Two Cases of Chronic Laryngitis Entirely Limited to the Right Vocal Cord, and Probably Tubercular in Character STCLAIR

THOMSON, London—*Jour. L., R. et O.*, March, 1899.

These cases were exhibited before the Laryngological Society of London, January, 1899. In one case the young woman had been hoarse for over a year. In the other, a male, hoarseness was present for nine months. No definite physical signs in the lungs existed. There was no expectoration. The right vocal cord presented a red fleshy condition, though the free edge of the cord was but slightly affected. The granulations appeared to originate from the mouth of Morgagni's ventricle. Both cases were decidedly improving under general treatment. The diagnosis was made on account of the chronic nature of the disease, and its one-sidedness, together with the appearance and situation of the fleshy granulations, and absence of symptoms of new growths or syphilitic history.

The process of exclusion assisted in arriving at the diagnosis of tubercular laryngitis.

LEDERMAN.

A Case of Chronic Urticaria of the Larynx—W. FREUDENTHAL—

Archiv fuer Laryngologie, Band ix, Heft 1, 1899.

Freudenthal reports a case which he cannot consider as anything else than chronic laryngeal urticaria. The patient was suffering at the same time from an urticaria of the skin which seemed to appear and disappear *pari passu* with certain digestive troubles. The condition of the epiglottis (the seat of the disorder) was extremely variable. First, there would be seen one or two herpes-like spots with edematous borders, then the whole epiglottis would be deep red, then again the redness would disappear, leaving the organ pale and free from vesicles.

The most effective treatment was a spray of a 20 per cent solution of menthol in oil.

VITUM.

Acute Diseases of the Larynx—II. MOULTON—*Med. Monograph*, Vol. i, No. 2, February, 1899.

A review of modern text-book and recent literature on the subject. For acute catarrhal laryngitis are recommended, menthol, ten to twenty grains to the ounce of petroleum oil as a spray every three to six hours; inhalation of the vapor of compound tincture of benzoin, made by putting a dram of the tincture in a pint of water heated to 140 to 160 F.; a cold, 2 per cent solution of ichthyol sprayed directly into the larynx is highly extolled.

[The advice to apply to the naso-pharynx, if much inflamed, nitrate of silver, twenty to forty grains to the ounce is, in the abstractor's experience (and he thinks, in that of many others) mischievous, except, perhaps, when there is a pronounced purulent secretion.]

The process termed acute edematous laryngitis, erysipelas of the larynx and phlegmonous laryngitis, for which the name: "acute septic inflammation of the throat," by Semon is to be met by prompt and vigorous treatment: An iced spray of $\frac{1}{2}$ per cent solution of ichthyol administered every fifteen minutes, followed later by a $\frac{1}{2}$ per cent solution, not iced; pilocarpine is valuable where its depressing effects are not feared. These measures failing, scarification is to be done. Tracheotomy is generally preferable to intubation.

EATON.

Mycosis of the Larynx, with Notes of a Case—A. A. GRAY, Glasgow—*Glasgow Med. Jour.*, March, 1899.

The author reports a unique case of mycosis of the larynx, confined to that region alone. A male, thirty-two years, complained of hoarseness of many years duration, dryness of the throat, and a tired feeling after speaking, the two latter symptoms being of some months duration. He had an attack of rheumatism ten or twelve years before. History good; no evidence of syphilis; had gained weight during last two years; no cough; no physical signs of pulmonary disease.

Laryngeal examination revealed left side of larynx swollen, particularly in posterior parts and along ary-epiglottic folds; swelling most marked over left arytenoid cartilage, and on the upper part of this was a small grayish-white surface, suggesting an ulcer. The left vocal cord was quite fixed; the right side of larynx was normal.

The removal of a piece of the swollen tissue on two occasions gave no evidence of tubercle bacilli, but a large number of leptothrix filaments were found. A mass of pultaceous white substance squeezed out of the swelling consisted almost entirely of leptothrix. Mouth, pharynx and naso-pharynx were free from leptothrix.

Creasote and menthol inhalations were used in succession and iodide of potassium for a little time. In three and a half months the swelling had disappeared, but the left cord remained fixed. The author inclines to the view that the cord became fixed as the result of the rheumatic attack, while the mycosis was superadded.

A. LOGAN TURNER.

Paralysis of the Larynx—Stenosis of the Esophagus— JOHN SENDZIMEK, Warsaw—*four. L., R. et O.*, March, 1899.

The patient was a farmer, fifty-five years old. He complained of difficulty in swallowing hard food. Emaciation was another symptom.

Examination showed a degree of tightening (stenosis) in the upper third of the esophagus, opposite the bifurcation of the wind pipe. Some relief was obtained by means of the bougie.

Three months later a paralysis of the right vocal cord was observed, which was in the phonatory position. The X-rays were applied, and revealed enlarged glands in the shape of irregular dark spots; the left side of the thorax did not present any change.

LEBERMAN.

Case of Acute Membranous Laryngitis in a Child, requiring Tracheotomy and Intubation; Recovery—SAINSBURY *Lancet*, October 8, 1898.

A child was admitted to hospital suffering from laryngeal obstruction. No membrane was found in the fauces, and a culture from the pharynx was negative so far as regards Klebs-Löffler bacillus. The breathing became more difficult so that tracheotomy was required. Later on attempts to do without the tube were unsuccessful on account of the dyspnea which supervened. This was overcome by wearing an O'Dwyer intubation-tube for twelve hours.

The case is well worthy of being recorded, especially in connection with the very similar case reported in the *Lancet* of August 13. Although the failure to find the bacillus of diphtheria is no certain proof of the absence of that disease, yet if the examinations have been careful and numerous we are fully justified in saying that the case is in all probability not diphtheritic. Theoretically it is by no means impossible for an inflammation caused by streptococci to be accompanied by a membranous exudation: all that is required is that the inflammation should be of sufficient intensity to give rise not merely to a "serous" exudation, but to an exudation which can coagulate. In the analogous case of inflammation of the serous membranes the degree of coagulability of an exudate varies greatly. There is much to be said in favor of the view of the existence of a membranous laryngitis not due to the Löffler bacillus, but its existence can only be proved by the putting on record of all cases which have been carefully observed and bacteriologically examined.

This case presents one or two points of special interest. In the first place, it would seem to be an instance of a non-diphtheritic membranous laryngitis arising independently of any direct damage to the part, as by scalding or other form of mechanico-chemical irritation. In favor of this conclusion there are (1) the negative results of cultures taken from the fauces and the direct negative examination of the membrane coughed up; (2) the absence of any albumen in the urine; (3) the absence of any paralytic sequelæ; and (4) the fact that no history pointing to contagion could be obtained. Non-

diphtheritic membranous laryngitis, contended for by many, among others by Fagge, denied by many others, and in any case regarded as a rare event, would seem to have been present here. In the next place the case is of interest on account of the speedy relief, obtained by intubation, of that troublesome condition which makes it sometimes so difficult to remove the tube after tracheotomy. It is not a question here of discussing the relative merits of intubation and tracheotomy, and the case is an instance simply of the value of intubation as a supplement to tracheotomy. Lastly, assuming the case to have been non-diphtheritic, we may note the complete harmlessness of 8,000 units of diphtheria antitoxin.

STCLAIR THOMSON.

Pedicated Intratracheal Tumor giving Rise to an Inspiratory Murmur—BRAUER—*Münchener Med. Wochenschr.*, February 7, 1899.

At a meeting of the Society of Natural History and Medicine of Heidelberg, the author reported the following case:

Woman, forty-eight years of age, has had some trouble in the throat for three years. She feels something flapping to and fro during respiration. Lately increasing dyspnea. There is heard on auscultation over the whole chest as well as over the larynx a short flapping noise which begins shortly after the beginning of inspiration. This sound is conducted from the larynx and is caused by a pediculated tumor striking against the tracheal wall. The tumor pretty nearly filled up the tracheal lumen and sprang from the second tracheal ring. It was removed by tracheotomy, and proved to be a hemangio sarcoma. Probably a case of sarcomatous degeneration of a fibroma.

VITTM.

Falsetto Voice in the Male; Report of Five Cases—G. HUDSON MAKUEN, Philadelphia—*Journal Am. Med. Assoc.*, March 4, 1899.

The author says it is a rare condition, he having seen only ten or twelve cases, of which only five have been under his care.

During its production the larynx is in an abnormally high position, due to a disturbance in the normal poise of the larynx by an over-action of the levators or the under-action of the depressors. The unnatural adjustment of the cartilages and its effect upon the vocal ligaments, and the lack of rigidity or contractility in the intrinsic muscles also plays a part.

The first case affected this quality of voice from choice.

The second case resulted from an attack of laryngitis. Result, cured.

In the third case the voice became a mixture of aphonia and the falsetto at the usual age when the voice changes. Cured.

The fourth and fifth cases were in nervous boys of fifteen years. The former having since childhood used the falsetto tone, the latter acquired it at puberty.

"Muscle training" is the main element in the treatment.

STEIN.

Intubation—JOSEPH P. O'DWYER, Detroit—*The Physician and Surgeon*, February, 1899.

The author reports a series of thirty-one cases in which intubation was performed. Ten of which were operated prior to the use of antitoxin, with a mortality of 80 per cent. The remaining twenty-one cases were first treated with the antitoxin and subsequently intubated, but a mortality of four and seventy-seven hundredths per cent. The author wishes his cases to emphasize the importance of the early employment of antitoxin, to be followed, when necessary, by intubation. This method often makes the operation of intubating unnecessary, it shortens the period of tubation and lessens the period of injury to the voice.

STEIN.

A Case of Hermaphroditism Diagnosed by the Laryngoscope—

E. BERTHOLD—*Archiv für Laryngologie*, Band ix, Heft 1, 1899.

The author reports the case of a person who appeared at his clinic complaining of hoarseness and sore throat. She was dressed as a woman, but on laryngoscopic examination the author discovered such very broad and long vocal cords that he became convinced that he was examining a male person. An examination proved that his suspicions were well founded, although the male organs were misshapen.

At a later period he examined the larynx by Röntgen rays and found that the thyroid cartilage had become ossified to an extent that only takes place in the male. Several cuts are reproduced from Chievitz showing the different stages of ossification in the cartilage, and finally the view of a female larynx showing that in the latter, the process stops far short of the degree reached in the male.

VITTM.

V. EAR.

Affections of the External Ear—B. ALEX. RANDALL—*Jour. Am. Med. Assn.*, March 4, 1899.

Twenty-five per cent of all ear diseases affect the external ear. Of these about one-half are infected cerumen. Eczematous diffused inflammations of the meatus and auricle constitute about 5 per cent, while furunculosis makes up 2 per cent. A host of rarities form the balance or about 4 per cent. If in the attempt to remove seed from the external meatus by means of a syringe and water, it is advisable to instil alcohol into the meatus to dehydrate the seed in case it is not removed. Germination is thereby prevented. Foreign bodies are harmless unless driven in by fire-arms or meddlesome extractors. Diffused inflammations should be treated by hydrogen dioxide to cleanse the dirty and infected surface. Furuncles should be treated with a tampon covered with the yellow oxide of mercury.

BALLENGER.

Case of Pyemia Treated with Injections of Antistreptococcic Serum—HERBERT M. RAMSAY—*Lancet*, October 22, 1898.

A girl with measles developed fever and discharge from one ear. The anterior and inferior part of the membrane was perforated. In spite of treatment the general symptoms increased, the temperature rose to 105.4°, and there was pain over the tip of the mastoid, but no tenderness over the mastoid cells. The "mastoid cells" were opened; nothing was found there except some muco-purulent secretion, but not sufficient to account for the high temperature, so no attempt was made to open up the tympanum. The skull was then opened, but the dura mater did not bulge, and the lateral sinus was evidently not occluded, and the wound was therefore closed. Restlessness, rigors, pneumonia, and an abscess in the wrist, supervened. Streptococci were found in the blood. Injections of anti-streptococcic serum were then given, and the patient recovered.

The interest in this case lies in the great improvement manifested in the patient's condition after the serum treatment was commenced. The temperature did not fall, though the average altogether was lower than before the injection, but the continued high temperature was accounted for by the presence of the abscess in the buttock. When this was evacuated the temperature almost immediately fell to normal. In spite of the temperature being high, the patient's general condition improved markedly. From the time the injections were commenced she slept better, took her nourishment better, and was altogether more natural. Then the wrist cleared up, her pulse improved, and she was brighter and better, whereas before she seemed in an almost hopeless state. This improvement was shown to be due to the anti-streptococcic serum treatment, as when for two days the injections were discontinued (from 8:30 a. m. on March 22 till 6:30 p. m. on March 24) she was manifestly not so well, and she improved again with the recommencement of the injections. Another point of interest is the complete disappearance of the organisms from the blood within twelve days of the commencement of the treatment. It is also interesting to note that streptococci were demonstrated in the blood and anti-streptococcic serum was used, as some cases of failure when anti-streptococcic serum has been tried may have been due to the organisms not having been streptococci. Altogether 205 c. c. of serum were injected.

STCLAIR THOMSON.

Remarks on Vibratory Massage of the Tympanum—SCHLEICHER—*Archiv. Int. de Laryngologic, etc.*, October, 1898.

Vibratory masseurs operated by electric motors or by the hand, while offering the advantage of regularity and ease of manipulation, they are inconvenient on account of their rapidity. The author prefers for massage of the tympanum an instrument which makes gentler oscillations, more extended, and operated by the hand.

[If this were the only objection to the mechanical vibratory masseurs it would require but little mechanical ingenuity to correct it. —W. S.]

SCHEPPEGRELL.

Treatment of Acute Otitis Media following Influenza—THEO-BALD—*Maryland Med. Jour.*, March 11, 1899.

The abortive treatment of these cases is considered by the author. He believes that infection of the middle ear and neighboring centers is most commonly carried through the Eustachian tube. It is a very difficult matter, even with good antiseptic precautions, to prevent infection after incising the tympanic membrane.

If the cases could be seen within a few hours the attack could be cut short. When the inflammation reaches a point that an incision is necessary it is extremely difficult to prevent suppuration.

The author promptly employs a solution of atropia in the ear. His formula is one grain of atropia sulphate, two grains of cocain muriate in two drachms of distilled water. Of this eight drops are poured into the ear about three or four times a day, according to the pain. An oily menstruum remains in contact better than a watery solution. (But the former is more liable to generate infection. M. D. L.) With the local treatment some form of cathartic is administered. If the symptoms are not relieved by this method the author advises a liberal incision through the posterior portion of the drum—syringing with an antiseptic solution two or three times daily should follow.

LILDERMAN.

The Grippe Ear—FAMETH C. EWING—*Tri-State Medical Journal*, January, 1899.

Differs in essential particulars from the condition that arises from naso-pharyngeal congestion. The grippe ear is likely to present a hemorrhagic exudation before the membrane gives way. Not infrequently with the rupture there is a discharge of blood, in other words, a true hemorrhagic otitis. Another characteristic is persistence of pain after the rupture. In ordinary otitis this would be considered a symptom of serious import, indicating insufficient drainage, and deep inflammation. Politzer, Gruber and Truckenbrod experienced mastoid complications oftener than in simple inflammatory otitis, but other noted observers do not bear them out in this observation. Treatment does not differ materially from that of simple otitis.

A. A.

Hypertrophic Catarrh of the Middle Ear—BURT D. LAFORCE—*Jour. Am. Med. Assn.*, February 25, 1899.

The etiology, the course of the disease and the symptoms are outlined. The influence of diathesis and of sanitary surroundings is mentioned. The importance of early treatment is emphasized. The treatment must be adapted to each individual case.

The naso-pharynx must be examined in all cases and any diseased conditions existing must be relieved before permanent improvement in the ear trouble can be expected. When there are secretions in the Eustachian tube or middle ear their removal by S. S. Bishop's method of auto-aspiration is advocated. This must be followed by inflation of the middle ear by either Valsalva's or Politzer's method.

ANDREWS.

Drum-Head Perforations Their Site and Significance—BARTON

H. POTIS AND B. ALEX. RANDALL—*Jour. Am. Med. Assn.*,
March 4, 1899.

From a study of 1,000 cases taken from private and clinic-record books it is shown that 39 per cent occur in the posterior inferior quadrant, 25 per cent in the anterior inferior quadrant, 10 per cent in Shrapnell's membrane. The total posterior perforations were 49 per cent, while the total anterior perforations were but 34 per cent. Perforations in the post-superior quadrant and in Shrapnell's membrane are not usually incurable by non-surgical treatment. The height of the perforation has but little influence as gravitation exerts but slight power in promoting drainage. Besides the patient is prone quite as much of the time as he is in the up-right position. Marginal perforations up and back may indicate serious complications, as caries of the ossicula, yet they are not necessarily intractable to treatment, they only become persistent grave matters when the real focus is in the antrum or mastoid cells.

BALLENGER.

Squamous-Celled Carcinoma following a Chronic Suppurative

Otitis Media—H. B. ROBINSON, W. S., London—*Jour. L., R. et O.*, March, 1899.

This peculiar sequela occurred in a female, forty-six years old. She had a discharge from the right ear for twenty-six years. Four years before consulting the author, the discharge increased, accompanied by deafness, noises in the head and shooting pains. During the last four months the discharge became thick, of a greenish-yellow color, and very offensive.

On examination the canal was found filled with what seemed to be granulation polypi. A mastoid operation was performed, and the cells were found filled with the same tissue. Microscopical examination revealed the true nature of the disease. There was no glandular enlargement in the neck. The mastoid wound would not heal. Facial paralysis existed. The patient did not continue under treatment.

LEDERMAN.

Chronic Suppuration of the Middle Ear—E. SCHMIEGELOW—

Nordiskt Med. Archiv., No. 17, 1898.

The author describes 96 cases which he has operated and gives tabulated details. He has operated over 300 in all. In 23 cases the affection had lasted 11 to 20 years, in 17 from one to five years, and in one case between 40 and 50 years. The mastoid apophysis was alone opened in 20 cases, with 55 per cent cured; in the rest the otitis was not arrested. The attic was opened in 14 cases; seven were cured and three improved; one relapsed and in two the result is unknown. In 53 cases the entire middle ear was opened and 70 per cent cured. In seven cases the operation was not completed. In nine cases there was improvement; three cases died—military tuberculosis, or meningitis. The transverse sinus was opened once.

In four cases the operation was followed by traumatic facial paralysis. He states that the patient must be prepared for the tediousness of the after-treatment. In one of his cases it required a year and a half; in several six to nine months, but the average limit was two to four. In 58 cases nothing could be learned as to the etiology. In 10 cases it commenced as an acute suppuration after influenza. In three it was evidently a carious process due to the presence of adenoid vegetations. In four cases the suppuration was tuberculous. In two it was the result of whooping cough, in 11 of scarlet fever, in two of measles, in five of trauma, and in one case there was a carcinomatous growth. The hearing was unaltered after the complete operation in eight; more or less improved in 27 cases. SCHEPPEGRELL.

Suppurative Disease of the Ear The Presence of Polypi and Granulations Therein not an Unfavorable Indication—LOUIS

J. LAUTENBACH—*four. Am. Med. Assn.*, March 4, 1899.

The author starts out with the proposition that "restoration of function in these cases is more frequent as well as more thorough than in chronic suppurative cases of equal duration without growths or polypi." He reports five cases in which the hearing for the watch was increased after the removal of the growth. In some of the cases the suppuration was reported as cured after the removal of the growth. The granulations are looked upon as a benign process opposed to necrosis, fibrous thickening, sclerosis and cicatrization. The prolonged vascularity attending these growths preserves the integrity of the mucosa, facial nerve and stapedo-vestibular articulation.

The author seems to have depended largely upon the restoration of the function of hearing as sign of having effected a cure.

BALLENGER.

Methodical Auditory Exercises and their Value for the Deaf—

VICTOR URBANTSCHITSCH—*Wiener Klin. Wochenschr.*, February 23, 1899.

In this paper U. treats more particularly of the instruction to be given to those who are only partially deaf and those who have already been benefited to some extent by the previous use of auditory exercises. He lays great stress upon training the *attention* of the pupil, and says that audition accomplished without effort is not nearly so beneficial to the deaf as when it can only be accomplished by strained attention. The bulk of this masterly and extensive paper is taken up by details of the treatment which, of course, cannot be entered into here. In closing, the author answers the question as to what class of cases will be benefited by these exercises by saying that as a general rule that can only be determined by making a trial. He very freely admits that there are many cases which are not benefited, but thinks that the proportion of successes is large enough to warrant the most strenuous efforts to ameliorate the condition of these most unfortunate among the sons of men. VITTM.

Two Cases Contrasting Effusion into the Middle Ear and into the Labyrinth—J. LOCKHART GIBSON—*Austral. Med. Gazette*, Vol. xviii, No. 2, February, 1899.

The object of the report is to point out the great importance to those engaged in general practice, of early and accurate diagnosis in cases of extreme and sudden deafness. One case was that of a serous exudation into the middle ear, the other, exudation into the internal ears, the result of a return of secondary syphilis. The contrast in the findings by the tuning forks is pointed out.

EATON.

Ophthalmoscopic Examination in Endocranial Otitic Complications—G. GRADENIGO—*Ann. de la Soc. Med., Chir. de Liège*, November, 1898.

The author states that lesions of the optic papilla are observed in about half the cases of endocranial complications of suppurative otitis, and consequently should be carefully sought, as they are frequently the first and only indication that the suppuration has invaded the cranial cavity, enabling an early diagnosis and effective treatment. He does not attempt to explain the mechanism of the papillitis, although he suggests that the chief factors may be the limitation of the endocranial space and compression of the sigmoid sinus. The papillitis affords no information in regard to the nature of the location of the endocranial lesions, but its disappearance after intervention is an index of the efficacy of the operation performed. His study of the subject is based on 635 observations, 74 being personal.

SCHEPPEGRELL.

A Case of Otitis Media with Purulent Meningitis—H. J. HAMILTON—*Canadian Practitioner and Review*, Vol. xxv, No. 2.

Patient, a male, aged thirty-two, who drank heavily, developed otitis media on December 31st, with bloody discharge next day, became delirious on the 8th of January and complained that left side seemed paralyzed. Admitted to hospital on the 9th and died twenty-four hours after admission. Post-mortem, pus was found in the right mastoid process. The arachnoid and pia mater on the right at the base were congested and infiltrated with thick yellow pus. This condition extended over the cortex of both hemispheres, but was more marked in the frontal and parietal regions.

The blood before and the pus after death gave pure cultures of streptococcus pyogenes.

GIBB WISHART.

The Retro-Auricular Opening for the Radical Cure of Chronic Suppurative Otitis Media—PASSOW—*Revue Hebd. de Laryngologie, etc.*, December 17, 1898.

The ideal aim of the radical cure is suppression of the suppuration by complete epidermization of the whole cavity which forms

the field of the operation. The preferable method is that which reaches this object the most surely and rapidly.

Primary union destroys almost completely the result of the operation: a late suture offers but little more advantage. A free retro-auricular opening should be preserved in order to place the patient beyond the chances of recurrence and danger. This also facilitates the post-operative treatment.

SCHEPPEGRELL.

On Malarial Disease Mistaken for an Affection of the Ear—D.

B. ST. JOHN ROOSA—*Yale Med. Jour.*, April, 1899.

This affection colors every disease with which it is associated. The author speaks of aural symptoms, having their origin in malarial diseases. He has had two cases, one of chronic suppurative otitis, and another of acute suppurative otitis, with mastoid involvement, in which a very high temperature suddenly occurred, without any cause in the condition of the ear to account for it, but which was promptly relieved by proper doses of quinine.

In the mastoid case the symptoms occurred after the mastoid operation, when the wound was well drained and clean. Treatment with quinine gave complete relief. In another case, a physician was seized with symptoms of Menière's disease, which yielded shortly to quinine in five grain doses.

LIDDERMAN.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

A Case of Diphtheria of the Pharynx Complicated with Numerous Tonsillar Abscesses and Empyema of Maxillary Antra—

JOHANN SENDZIAK—*Archiv fuer Laryngologie*, Band ix, Heft 1, 1899.

The title very nearly covers all that is noteworthy. Of especial interest, however, is the fact that within a short time the patient suffered from abscess of the faucial tonsil, of the peritonsillar connective tissue, of the pharyngeal tonsil, and of the lingual tonsil. The spontaneous opening of the latter was accompanied by profuse hemorrhage.

VITTUM.

Diphtheria—G. O. MORGRIDGE—*Med. Monograph*, Vol. i, No. 2, February, 1899.

Contains nothing new.

EATON.

The Value of Glycero=Phosphates in the Treatment of Graves' Disease—F. X. DERCUM—*Med. Herald*, March, 1899.

The pathology of this disease is not yet clear. The indications are that patients afflicted with it suffer from the absorption of thyroid products which are abnormal in amount and character, which would class the affection as an auto-infection, it thus being the op-

posite of myxedema. The author ignores the cardiac symptoms, and has found the glycerophosphate of sodium or of calcium to be of great value. He also withdraws the more stimulating foods, such as meat and coffee, or stimulants in any form. Milk or some simple nourishing food should be given. EATON.

Subacute Bronchitis in Infants and Children—E. M. DUPAQUIER.
—*New Orleans Med. and Surg. Jour.*, December, 1898.

General debility is responsible for many of these cases. Dietetic and hygienic methods are advocated. SCHEPPEGRELL.

Malignant Disease of the Esophagus—H. A. BRUCE—*Canadian Practitioner and Review*, Vol. xxv, No. 2.

The history of a case occurring in a male, aged thirty-six, is detailed, with a full description of the conditions post-mortem. In conclusion, the writer denies the truth of the statement made by J. P. Arnold, in the *International Medical Magazine*, that squamous-celled epithelioma is the form of carcinoma invariably met with in the esophagus. "My case and others that have been reported show that his (Arnold's) assertion is wrong, and that glandular carcinoma does occur in the esophagus, although very infrequently.

The primary seat of the disease is undoubtedly in the lower end of the esophagus, and the feature of special interest is the occurrence of secondary growths of the same type, both upward and downward along the alimentary canal. In the case of the esophagus the secondaries higher up might be due to epithelial cells or parasites being carried up with food vomited, or the growth might be disseminated along the lymphatics against the lymph stream, a possibility which is now generally accepted. In considering the secondary growths in the stomach, cæcum and appendix, there are at least four ways of explaining them: (1) That epithelium has been carried from the growth with the food; (2) parasites carried from growth with food; (3) dissemination by lymph stream; (4) dissemination by blood current. Then, again, the disease may have extended from the esophagus directly by continuity into the cardiac end of the stomach and along the lesser curvature, and from here into the liver, and throughout the liver by the portal circulation. GIBB WISHART.

Rebreathed Air as a Poison per se—JOHN HARTLEY—*Lancet*, September 17, 1898.

The modern treatment of phthisis is made up of three essential factors: (1) The discontinuance of the supply of bacilli from without; (2) the abundance of nutritive material for the tissues; and (3) the supply of an abundance of fresh air uncontaminated by the products of respiration. This seems to mean that the tissues, if not too enfeebled, may be trusted to deal with the bacilli already present if their metabolism is kept going at high pressure. Rebreathed air and

sewer gas should not be looked upon as mere carriers of accidental poisons, but as poisons per se. Hence the writer enters a strong plea for thorough ventilation—a different thing from the small trickle of air supplied by the tiny “ventilators” which are so hopelessly inadequate.

STCLAIR THOMSON.

A Case of Phlegmon of the Neck—FEIGE—*Deutsche Med. Wochenschr.*, February 9, 1899.

F. reports a case where the abscess first broke internally into the throat and afterwards externally in the angle formed by the sternocleido-mastoid and the sterno-hyoid. The internal opening was at the level of the superior horn of the thyroid cartilage and posterior to it. Dressings placed over the exterior opening at once became moistened when the patient swallowed any fluid. Air was also forced through the fistula in breathing. This condition of things soon led to a fatal sepsis, the infection probably occurring through the internal opening.

VITTUM.

VII. INSTRUMENTS AND THERAPY.

A New Instrument for Forced Examination of the Larynx in Children—A. D. BLACKADER—*Progressive Medicine*, Vol. 1, March, 1899.

Dr. A. D. Blackader, of Montreal, describes two novel methods. The first is Escat's suggestion. He has devised a peculiar form of tongue depressor. The instrument is curved so as to adapt itself exactly to the base of the tongue. On the distal extremity a blunt



Escat's Laryngoscopic Tongue Depressor

tork is fixed, of which the two branches descend, one on either side of the epiglottis, ending in two rounded points which, when the instrument is used, are supposed to lodge in the pyriform sinuses on each side of the laryngeal orifice. The instrument serves, therefore, not only to control the tongue, but to pull forward the rima glottidis from the posterior wall of the pharynx, and so to provide good conditions for the employment of the laryngoscopic mirror. It is probable that on the principles used by Kirstein, autoscapy, or laryngeal examination without a mirror, the examiner will be enabled with a little practice, to see a good deal of the larynx (especially its posterior part, which is the more important one), by direct vision, and without the use of the mirror.

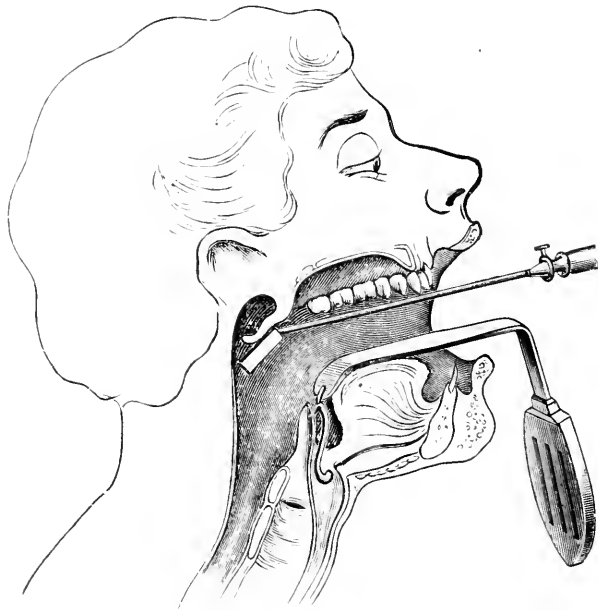


Diagram showing position of Laryngoscopic Tongue Depressor during forcible examination of larynx in children.

The method of the manipulations with the new instrument is well illustrated in the diagrams presented. It will, as a rule, be necessary, even with the instrument, to have the movements of the child restrained by a sheet rolled around its arms and legs in the usual way, and to have it carefully held on the knees of an assistant, but with this the examination of the larynx can be made much more satisfactorily than with the ordinary tongue depressor.

A simple method for the examination of young children demonstrated by Lack, at a meeting of the Laryngological Society of

London, about a year ago, is also given in this article. The advantage of this second method is that no special instruments are required and no force is employed. "The infant is placed in the usual position for laryngoscopy, the index finger of the left hand is passed well into the mouth, and the terminal phalanx hooked around the hyoid bone, which is pulled forward. The rest of the finger acts as a tongue depressor, the knuckle as a gag, while the left thumb under the chin serves to steady the head. With the use of a small mirror the larynx can now be easily seen. The method causes no pain, and requires no anesthetic, while the younger the infant the less is the resistance and the easier the examination."

GOLDSTEIN.

A Catheter-Trocar for Puncturing the Maxillary Sinus—SPRING-GER—*Archiv fuer Laryngologie*, Band ix, Heft 1, 1899.

This trocar is shaped like a Hartmann's Eustachian catheter with a sharpened point. The size would correspond with No. 2 or 3 of those instruments. The author thinks it is especially adapted for certain cases. The handle is fitted with a metal loop to show the direction of the curve, and at its extremity is finished in a screw thread. By this means a rubber tube may be attached, through which to wash out the cavity.

VITTM.

A Powder Blower for the Antrum of Highmore and the Dry Treatment of Empyema by Powdered Nitrate of Silver—JOHANN FEIN—*Archiv fuer Laryngologie*, Band ix, Heft 1, 1899.

In this article the author describes a powder blower which is designed to force the powder out of the instrument in a fine cloud, thus tending to cover the whole interior surface with a thin layer of the remedy. He also gives his experience in the treatment of old suppurating cases with powdered nitrate of silver. The author says that at first he diluted this with powdered starch, but, finding that no irritation followed the use of stronger mixtures, he soon got to using pure pulverized silver nitrate. It seems to produce no ill effect beyond a slight burning sensation directly after the application.

His work was done in Chiari's clinic, and the cases handed over to him for treatment were such as forbade any hope of a complete cure. He, however, changed the conditions very much. Discharge was markedly diminished, and all other symptoms were much improved. The only case where the powder would not reach all the surface would be where diverticula were present, or where the main cavity is divided by ridges or partitions.

VITTM.

Of what Value is Gargling?—M. SAENDER—*Münchener Med. Wochenschr.*, February 21, 1899.

The author maintains that, with rare exceptions, the patient is un-

able to bathe parts lying back of the anterior faucial pillars with gargling fluids. His method of testing this was to paint the tonsils with a strong solution of methylene blue and then instruct the patient to gargle with water. When this process was properly and carefully carried out, the author says that the water was invariably ejected from the mouth clear and unstained by the methylene blue.

VITTUM.

Paramonochlorophenol; its use in the Local Treatment of Laryngeal Tuberculosis—GEO. L. RICHARDS, Fall River, Mass.—*Journal Am. Med. Assoc.*, March 4, 1899.

The writer thinks this remedy increases the effect of the application of lactic acid. Using it in solutions of 4 to 10 per cent in a menstruum of glycerine and water.

STEIN.

A Portable Telephone for the Detection of Simulated Unilateral Deafness—J. KALCIC—*Wiener Klin. Wochenschr.*, Feb. 9, 1899.

At a meeting of the Scientific Association of the Royal Military Surgeons of the Garrison of Vienna Kalcic read a paper on the above subject. After speaking in a general way of the difficulty in detecting any purely functional trouble of the ear by physical examination alone, he described this new instrument. He began by referring to the stereoscope of Lawrence for the detection of unilateral, weakened or obliterated vision. In using this instrument, if the two pictures are alike, only the ordinary stereoscopic effect is produced. If two different pictures are introduced into the frame, then only one is seen, or one is very much more distinct than the other. This same idea carried out has led to the construction of the instrument under consideration. The apparatus consists of a small box containing two Gnom cells. There are attached four receivers and two microphones. These are so arranged that one microphone is connected with a little telephone station, and through it, to the two right receivers; the other one to the two left receivers. The connecting wires may be sufficiently long to permit the one undergoing the examination to be seated in a different room from the one occupied by the examiners. The two examiners should endeavor to speak in nearly the same tone and with the same intensity. They may also during the examination frequently exchange microphones. By a careful discrimination it is easy to determine in this way whether the deafness is real or simulated.

VITTUM.

A Micro-phonograph as a Means of Acoustic Exercises in Cases of Deaf-Mutism in Young Children—GELLÉ—*Revue Hebdomadaire de Laryngologie, etc.*, December 10, 1898.

As a result of his experience, the author maintains that the acoustic exercises obtained by means of the micro-phonograph render possible the education of deaf-mute children at a very early age.

The excitation of the auditory nerve-centers of hearing has an effect superior to other forms of education, because it follows the natural method of development of the faculty of language and tends directly to awaken and develop auditional language.

SCHEPPELGRELL.

Cleansing Solution for the Nasal Passages—G. STERLING RYERSON
—*Canadian Practitioner and Review*, Vol. xxv, No. 2.

The writer finding that Dobell's solution was rather harsh and irritating to the nose, in 1884 devised the following formula which he has used ever since:

℞ Sodæ bicarb,	
Sodæ biborat,	
Sodii chlorid	aa gr. xxx.
Sodii salicylat	gr. xl.
Ol. bergamot	℥iij
Listerine	℥ss.
Glycerine	℥i.
Aq. destil	ad ℥viii.

The above was devised without knowledge of Seiler's solution, and has proved eminently satisfactory.

GIBB WISHART.

Formaldehyde; its use in the Treatment of Tubercular Laryngitis—THOS. J. GALLAHER, Denver, Colo.—*Journal Am. Med. Assoc.*, March 4, 1899.

The author believes it to be the most useful treatment both in ulcerative and infiltrative types. He uses a .5 to 1 per cent solution, gradually increasing to 10 per cent.

STEIN.

The Treatment of Ozena with Special Reference to Cupric Electrolysis—P. McBRIDE, Edinburgh *Edinburgh Med. Jour.*, March, 1899.

Having briefly defined the nature of ozena: the writer passes in review the various therapeutic agents which have been employed. The treatment by cupric electrolysis is then dealt with, the author detailing his own experience with it. Hitherto, no other description has been given in English literature. A considerable number of patients have been thus treated by him, while eight are described in this paper, with more or less detail, without any selection having been made. The strength of the current used was from 2^{10} milliamperes: the copper needle attached to the positive pole was inserted into the inferior or middle turbinated, the platinum negative needle was passed under the mucous membrane of the septum: cocaine was first applied: each sitting lasted about ten minutes. As a rule, little pain was complained of, nor were there disagreeable after-effects. The number of sittings varied in the different cases, according to the benefit derived from each application. In all, improvement at once manifested itself after the application.

both nostrils improving though the needles were only inserted on one side. The change consisted in disappearance of the fetor, a moist condition of the mucosa and a more ready detachment of the crusts. Four of the patients were practically cured for long periods, extending to eighteen months. In one there was marked improvement, in one, apparent cure for some months and then syringing had to be resumed. In two, there was only improvement for a few weeks. Though the fetor disappeared, the atrophy remained. Electrolysis is of undoubted value in ozena.

A. LOGAN TURNER.

A Practical Obturator for Trachea Tubes—ALEXANDER BAUROWICZ—*Archiv fuer Laryngologie*, Band ix, Heft 1, 1899.

This is a device for closing the tube, in cases where for any reason it has to be worn for long periods of time. In many instances the patient is able to breathe easily with the tube closed, and yet cannot tolerate its removal. This little device is merely a section of an inner tube with both ends closed. It is introduced into the outer tube and locked into place by a half turn.

VITTUM.

Can You Cure Catarrh?—S. S. BISHOP—*The Med. Herald*, February 1899.

To be successful in the treatment of catarrh of the upper-air passages one must not only carry out the proper local treatment, but he must also look to his patients' hygienic surroundings, proper clothing, personal habits and the elimination of any uric acid habit of body that may be present.

If patients live in an atmosphere laden with local excitants, such as irritating gases, dust, etc., these conditions must be changed for favorable ones. The surface of the body must be properly protected from sudden and extreme changes of temperature. Woolen garments are far superior to cotton or silk for this purpose. In temperate and frigid zones vegetable fiber is unfit to be worn next to the skin except during the warmest weather. Over-feeding, excessive use of stimulants, and certain exhausted states of the sexual system and menstrual irregularities are favorable to the production of nasal catarrh, and they retard a cure. There is certainly a close sympathetic relation between the erectile nasal tissue and the generative organs. Many such instances are given. Uricacidemia is responsible for a great deal of suffering from catarrhal states of the nose and throat and requires treatment by diet and exercise as well as by the salicylates and lithia.

MCLEAN.

BOOK REVIEWS.

Progressive Medicine.—A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 490 pages, 25 illustrations and 3 colored plates. Lea Brothers & Co., Philadelphia and New York.

The first volume of this new quarterly digest of medical advancement in the medical and surgical sciences gives promise of an interesting and valuable series, if the reputation of the editor and his able staff of collaborators, the excellent selection of the subject matter and the activity of its publishers may be considered as factors to this end.

The introductory monograph on "Surgery of the Head, Neck and Chest" is of more than usual value to physicians interested in oto-laryngology. "The Surgical Treatment of Exophthalmic Goitre," "Heli-lip and Cleft-palate," "Carcinoma of the Tongue, Tracheotomy Under Local Anesthesia and Abscess of the Brain have all been ably considered in the light of progressive surgery by Dr. J. C. DaCosta.

In the next chapter devoted to diseases of children, Dr. A. D. Blackader includes a special section on Diseases of the Upper Air Passages in Children.

"Retro-pharyngeal Abscess," "The Examination of the Larynx," "Adenoid Vegetations," "The Various Forms of Pneumonia," "Asthma," "Pertussis," "Diphtheria," are given due attention. Several of these sections are noted in greater detail in the Abstract Department of THE LARYNGOSCOPE.

Perhaps the most valuable contribution to this number from the standard of the laryngologist is offered by Dr. A. Logan Turner. In special paragraphs he considers The Three Tonsils as Channels of Infection, The Pressure Pouch of the Esophagus, The Difficulties in the Examination of the Larynx in Infants, The Therapy of Orthoform in Diseases of the Nose and Throat, and several interesting and practical paragraphs on Deformities of the Nose and Throat Rectification.

A special chapter is devoted to Ozena and its Treatment by Cupric Electrolysis and by Diphtheria Antitoxin and other means.

Hay Fever, Nasal Hydrorrhea and Fibronous Rhinitis also receive attention.

A chapter on the Nasal Accessory Sinuses with a series of instructive skulls showing the open sinuses, completes this interesting monograph.

Otology is represented in the last monograph of the volume by Dr. Robt. L. Randolph. The anatomy and physiology is brought up to date. The radical operation as modified by Kretschmann Paso is briefly emphasized by a series of illustrations of the operations.

Sinus Thrombosis, Neuralgia of the Mastoid, Structure of the Eustachian Tube, Sclerosis of the Middle Ear, The Pressure Sound and Thyroid Treatment are also noted.

International Clinics, Volume IV, Eighth Series, 1899. J. B. Lippincott Co., Philadelphia, Publishers.

Two chapters of especial interest in oto-laryngology in the latest volume of this series are those of Prof. Urbantschitsch on Hearing Exercises for the Deaf and Dumb, and of Dr. Casey A. Wood on The More Frequent Diseases of the Frontal Sinuses. The monograph of Urbantschitsch describes in practical outline the system which he successfully employs in training deaf-mutes and in stimulating the latent auditory nerve by voice drill.

The introduction to Wood's monograph on "Diseases of the Frontal Sinuses" is preceded by the anatomy of these cavities and surgical landmarks and is followed by a brief description of the symptoms and data of the more frequent diseases of this accessory cavity. Two full page cuts accompanying the article.

The Section of Ophthalmology is represented by an article from the pen of Dr. Edward Jackson introducing several interesting descriptions of clinical examinations, and a series of clinics by Dr. Henry Dickson Bruns.

In the Section of Therapy a monograph by Prof. J. Grancher on the "Treatment of Tuberculosis" may be of especial interest to our readers.

Sajous' Annual and Analytical Cyclopedia of Practical Medicine, Vol. III. The F. A. Davis Co., Philadelphia, 1899.

The principal feature of Vol. III of this up-to-date cyclopedia is the valuable trio of articles by Professors Osler and Norton on "Infantile Myxoedema" (Cretinism), Putnam on "Exophthalmic Goitre" and Adama on "Goitre." The literature of these important subjects is given detailed consideration and every phase of therapy is included.

The Diseases of the External Ear, The Therapy of Formaldehyde in Disorders of the Respiratory Tract and the Uses of Hydrogen Dioxide may be found of special interest to oto-laryngologic readers.

Rhinologie, Laryngologie und Otologie in ihrer Bedeutung fuer die allgemeine Medicin. Von Dr. Med. E. P. Friedrich. Leipzig, F. C. W. Vogel. pp. 341, 1899.

This work has been written, as the author states in his preface, for the purpose of keeping the specialist in closer touch with general medicine. To break down the barriers which tend to form between special and general practice, and to remind the specialist that his field of work is a part of the whole medical structure and not a thing separate and by itself. The interrelations between the upper-air tract and the body in general are so manifold and far-reaching that he who would succeed in the treatment of its diseases must keep constantly in mind the influence which numerous other organs and numerous general diseases exert upon his particular field of labor.

The scope of the book is such that clinical descriptions are necessarily omitted. The author limits himself strictly to pointing out the connections and influences which disease of various parts of the organism has upon the nose, throat and ear and *vice versa*.

In a work so comprehensive as the present one we should not expect to find very lengthy dissertations on any single division of the subject, and such is the case. The author has, however, apparently omitted nothing of importance, and has kept the work well abreast of the times.

The book is charmingly written, the author's style being clear and concise.

Perhaps the best method of showing the extent and scope of the work will be to give a list of the subjects treated in its different divisions.

I. Diseases of the respiratory organs. II. Diseases of the circulatory system. III. Diseases of the digestive apparatus. IV. Diseases of the blood. V. Chronic constitutional diseases. VI. Acute infectious diseases. VII. Chronic infectious diseases. VIII. Diseases of the kidneys. IX. Diseases of the skin and sexual organs. X. Diseases of the eye. XI. Intoxications. XII. Diseases of the nervous system.

The book is well printed, on good paper and is altogether what we might expect from the well-known publishing house of F. C. W. Vogel.

VITUM.

THE LARYNGOSCOPE.

VOL. VI.

ST. LOUIS, MO., JUNE, 1899.

No. 6.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

TREATMENT OF NASAL STENOSIS DUE TO DEFLECTIVE SEPTA, WITH OR WITHOUT THICKENING OF CONVEX SIDE.*

BY F. H. BOSWORTH, M.D., NEW YORK.

On December 30, 1886, I read before this Academy a paper on deformities of the nasal septum in which I presented and advocated the use of a saw for correcting this lesion. We were at this time still struggling with that ancient opprobrium of medicine, nasal catarrh—an unfortunate and meaningless term which had been handed down to us from ancient times, apparently with the design of defining a special form of disease, but which in fact designated and specified nothing, and only added confusion, becoming practically a cloak with which to clothe our ignorance of diseases in this important region. We had, however, at this time made notable progress in arriving at definite knowledge of nasal diseases in that we had learned the true physiology of the nasal mucous membrane. At as late a date even as 1878, Remy had announced the prominent function of the nasal mucous membrane to be that of olfaction, and while recognizing the existence of serous exosmosis, he held that this was merely for the purpose of affording a solvent fluid for the particles of odorous bodies by which they were enabled to come in contact with the terminal filaments of the olfactory nerve. In 1885, I read a paper before the American Climatological Association in which I announced that the great and prominent function of the nasal mucous membrane was respiratory, and that its olfactory function was secondary and to an extent adventitious. This respiratory function was constituted by the

* First paper of Series read before the Section of Laryngology, New York Academy of Medicine, April 26, 1899.

turbinated bodies which poured out upon the surface of the mucous membrane in the course of the twenty-four hours, from twelve to sixteen ounces of thin watery serum, the object being to so far moisten the ingoing current of air as that the air which reached the bronchial tubes and air cells below should become completely saturated and thereby produce no deleterious effect upon this tract. This view was subsequently completely substantiated by the very interesting series of experiments performed by Aschenbrandt in the physiological laboratory at Leipsic in 1886, and still further by Kayser in 1887. With this definite knowledge of the true physiological function of the nasal passages we were enabled to attack that old opprobrium, nasal catarrh, with infinitely more rational methods and with a certain amount of success. In this connection you will appreciate better, perhaps, the object of my paper already referred to if given in its whole title—"Deformities of the Nasal Septum, A new Operation for their Correction, with an Analysis of its results in 166 cases, as throwing new light on the Pathology of Diseases of the Upper-air Tract and their Relation to the so-called Nasal Reflexes." I then advocated the complete removal of the projecting portion of a deflected septum, with the idea of restoring patency to the nasal cavity whereby the current of inspired air might be allowed to pass unobstructed to the parts below. Thus the normal respiratory function of the nose was re-established in these cases, and by this measure catarrhal conditions of the air tract below were cured, and this without direct local treatment to these parts, but by removing what I considered to be the cause of these so-called cases of laryngitis, trachitis, etc. In other words, the claim was that the integrity of the whole of the upper-air tract was dependent upon the great respiratory function of the nasal chambers being unhampered. The new operation which I then suggested consisted in removing the projecting portion of a deflected septum by means of a small saw. This was not a new instrument, for saws had been used before. My only claim was in presenting an instrument which would do the work in a cleanly and surgical manner and this had not been done heretofore. The removal of the projecting portion of the septum was not a new thing. Years before this Blandin had advocated the use of a punch which removed the whole of the offending tissue. This left, however, a large perforation of the septum which was objectionable. In 1875, Adams treating the subject from the point of view of the orthopædic surgeon had used the flat-bladed forceps for crushing and refracturing the parts, subsequently holding them in place by splints. This was a painful and generally unsuccessful method of

dealing with the condition. Steele, in 1881, modified Blandin's punch in such a way as to make stellate incisions through the septum; subsequently holding the parts in place by means of plugs. Ingalls, of Chicago, in 1882, reported having successfully dissected up the mucous membrane, covering the projecting portion and subsequently sliced it off with a knife, refitting the parts. This was far the most perfect and most thoroughly surgical procedure ever devised. Unfortunately this device is only available in a small number of cases. Jarvis, of New York, used the transfixion needle and snare, and Roberts, of Philadelphia, the pin for the accomplishment of the same end, with more or less success. The saw, as before stated, which I presented, did its work thoroughly, and in a thoroughly surgical manner. The operation was done usually at an office sitting and in the very large majority of cases was followed by no especially uncomfortable results.

A new septum was sawed out of the old and crumpled septum, in much the same manner as a straight board is sawed out of a crooked log. Hemorrhages were usually not severe, and in but very few cases required the insertion of plugs. It is now twelve years since I advocated the saw operation. I have continued to practice it without much change. The very favorable series of results accomplished in the one hundred and sixty-six (166) operations reported at that time have been fully sustained by my subsequent cases. I see no reason to make any change or to lose faith in the use of the instrument. It still does its work well and the results are equally favorable. Since then other operations have been suggested and devised, the success of which cannot be questioned. I have no disposition to criticise, and perhaps it is just as well not to discuss now, the advantages or disadvantages of these. It does seem to me, however, that there is something to be said in favor of an operation which can be accomplished at an office sitting, and which does not involve confinement to the house or bed, and practically does not interfere with the daily occupation.

Certainly, whatever operation is resorted to in these cases, the contention of my original paper in 1886 have been most fully established by the admirable results which have followed its use, and surely that contention could not have been established if the operation had not been a success. However that may be, I have always considered that the demonstration of the dependence of diseases of the air tract upon the normal functional activity of the nasal passages as of far more importance than the demonstration of the success of the saw operation.

41 Park Avenue.

TREATMENT OF NASAL STENOSIS DUE TO DEFLECTIVE SEPTA. WITH OR WITHOUT THICKENING OF CONVEX SIDE.*

BY MORRIS J. ASCH, M.D., NEW YORK.

The time allowed for each speaker to-night being necessarily limited, I shall not take up the time of the Section with any remarks concerning the etiology or pathology of the deformity, but will merely describe the means that I employ to correct it, with such other matter as may be necessary to elucidate my remarks. In the early days of my experience as a rhinologist, my severest disappointments occurred when I undertook to relieve the inconvenience caused by the stenosis resulting from a deviated septum. I had tried all the methods proposed. I had sawed—I had transfixed and snared. I had crushed with Adams' forceps; made stellate incisions and held the parts in place with ivory plugs, but to my chagrin I found that I had either made only a partial cure by the establishment of a perforation, or else I had the mortification when the ivory plugs had been removed for a few weeks, to have my patient return with his nose in the same condition as before operation. It then occurred to me that the vital point to attain in operating for this condition was not to cut away the deviated portion, nor to make a perforation, but to destroy the resiliency of the cartilage in such a way, that when it should be forced back into its proper position, and held so for a proper length of time, the result would be a straightened septum without any loss of tissue, and the re-establishment of the respiratory function of the affected nostril. I first operated with this end in view in 1882. In 1890, having thoroughly tested the operation I read a paper entitled, "A New Operation for Deviated Cartilaginous Septum" before the American Laryngological Association, at its meeting in Baltimore. Subsequently I read a paper before the Laryngological Section of the New York Academy of Medicine on the same subject, describing the operation and showing a number of cases that had been operated on by my methods. In 1898, Dr. Emil Mayer read a paper before the Surgical Section of the Academy reporting 200 cases with their results. Since then, at the New York Eye and Ear Infirmary, from October, 1898, to April, 1899, there have been 139 cases operated on by this method, all of which I have had an opportunity to ob-

* Second paper of Series read before the Section of Laryngology, New York Academy of Medicine, April 26, 1899.

serve, being either in my own service or in those of my colleagues. In no case did any complication occur, either in the way of sepsis, hemorrhage or resulting perforation, and in all of the cases which I was able to trace the results were satisfactory, inas-much as the respiratory function of the nose was restored.

The instruments required for the operation consist of a cutting forceps, compressing forceps, blunt and sharp separators to break up any adhesions which may exist between the convex portion of the deviated septum and the inferior turbinated body, and tubular nasal splints made of hard rubber. The cutting forceps or scissors are made in two sizes. They are powerful instruments, curving outward from the point of junction and meeting again in front, one blade is blunt and narrow for introduction into the stenosed nostril, while the other is sharp, with a triangular blade. Other scissors are made with the blades bent at a right angle, for use in deviations requiring an incision running downward. The compressing forceps used for straightening up the septum after incision are of two sizes with long and short blade respectively. The splints are curved hollow tubes made of vulcanite with perforations to prevent them slipping. The tubes first made for me by Tiemann & Co. were oval in shape; later on at the suggestion of Dr. Emil Mayer, they were flattened on the sides, and this shape I prefer, as a rule, to the original. An atomizer containing Dobell's solution is kept in a bowl of ice to check any hemorrhage. The operation is performed under complete anesthesia of chloroform, ether or Schleich's mixture, which has given good results in these cases. All the instruments are to be carefully sterilized, and the nose washed out with an antiseptic spray before operating. The head of the patient being drawn backward over the edge of the table so that blood will not enter the larynx, and the nostril illuminated either by direct or artificial light; the blunt separator is introduced into the deviated side, so as to break up any adhesions that may exist, and to ascertain the presence of any bony obstruction posteriorly, should such be found, the sharp separator can be used, or an ordinary small bone chisel. The scissors are now introduced parallel to the floor of the nose, the sharp blade being in the concavity and the blunt one over the line of greatest convexity of the deviation, it is important that the blades should be at right angle to the septum at the place of incision, otherwise the blades may override and the scissors fail to cut through. The blades being firmly closed, the sharp one cuts through the cartilage into the opposite side with a distinct snap. The scissors are then opened and completely withdrawn. They are immediately reintroduced in the same

manner as before, with the blades pointing this time in a vertical direction, crossing the line of the first incision as near as possible at right angles and at its center; the scissors are now closed and the second incision made, after which the scissors are opened and withdrawn. We have thus four segments as the result of the crucial incision. The operator now introduces his finger into the stenosed nostril and forcibly pushes the segments into the concavity of the opposite side, effectually breaking them at their base. The finger should be pushed through. This part of the procedure must be done thoroughly and carefully, for on it depends the success of the operation. If the segments are thoroughly broken at their bases the resiliency of the cartilage is destroyed and the deviation cannot recur. The compressing forceps are now introduced, one blade in each nostril and the septum compressed in order to straighten it still farther, and to force the broken segments to more completely override each other. The iced Dobell's solution in the atomizer is now sprayed into the nostrils in order to check the bleeding, and the sterilized tubes introduced, a snugly-fitting one into the side previously stenosed and a smaller one in the opposite. These serve to prevent hemorrhage and to hold the septum in its new position. This completes the operation, which in experienced hands should not occupy over five minutes. The patient is now placed in bed, iced cloths applied externally and a cold antiseptic solution sprayed into the nostrils every half hour. Twenty-four hours after operation the tube in the non-stenosed side is removed and not replaced; the spray and compresses being continued. Twenty-four hours later the tube in the opposite side is removed, thoroughly cleansed and sterilized, the nose is sprayed and cleansed and the tube replaced, cocaine being used if necessary. The same tube should be reinserted unless it proves too large for comfort, in which case the next smaller size can be used. This tube must be taken out and cleansed every day by the surgeon while the patient remains in bed, which he should do for at least four days. At the end of this time, the nostril is less sensitive and the patient should be able to extract and reintroduce the tube himself. This is to be done every day for four weeks, coming once a week to the surgeon for observation, and at the end of the time the tube is permanently withdrawn, the septum having now become sufficiently solid to remain in its new position without support. It sometimes happens that the lower segment remains thickened after the tube has been withdrawn, and projects into the nasal cavity; this can easily be rectified by the electro-trephine or galvanic cautery, though if left to itself the thickening will eventually disappear.

When I first described this operation I made use of a metallic splint held in place by a packing of sterilized gauze, but recognizing the disadvantage of the method which necessitated the patient's breathing through his mouth, I devised this hollow tubular splint, which I now use, and which I described in an unpublished paper read by me before this section in 1897, although it had been in use by me for some years previously. The merits of the operation are its simplicity, the ease and rapidity with which it can be performed, and its safety. In over 350 operations coming under my personal knowledge within the past ten years not a single death occurred, and in only a very few badly nourished cachectic patients were perforations observed. It may be well to add in closing, that this operation is meant for deviations of the cartilaginous septum, that I strongly deprecate any forcible breaking of bony deviations either of the vomer or of the ethmoid. Should such deviations exist, they can be treated either with the chisel or electro-trephine *after* the permanent removal of the tubes. To practice such fractures may cause dangerous hemorrhage as well as fatal septic or meningeal complications.

5 West Thirtieth Street.

Symptomatology of Mucous Polypi of the Nose—LACROIX—*Congrès Méd.*, November, 1898.

The author refers to the well-known etiology of nasal polypi in connection with empyema of the accessory sinuses. In 91 to 95 per cent of the cases, the pedicle of the polyp is inserted in the infundibulum.

SCHIEFFEL.

Golovine's Osteo-Plastic Operation on the Frontal Sinus—A. L. KENNY—*Australasian Med. Gaz.*, Vol. xviii, No. 1, January, 1899.

A description of a case operated upon by Golovine's modification of Czerny's operation. (*Archives of Ophthalmology*, May, 1898, and Norris and Oliver's "System of Diseases of the Eye," p. 927.) Kenny used, in making the bone incision a circular bone-cutter, devised by himself, of which he gives a cut. It is much more effective than a chisel, or a trephine on a curved bony surface.

EATON.

A Method of Resecting the Nasal Septum—MASSAL—*Revue Heb. de Laryngologie*, Nov. 29, 1898.

A description of the method of Escat, which consists of loosening the mucous membrane of the healthy side by an injection of boiled water and of cutting immediately afterwards the projection of the septum by means of a guarded bistoury.

SCHIEFFEL.

TREATMENT OF NASAL STENOSIS DUE TO DEFLECTIVE SEPTA, WITH OR WITHOUT THICKENING OF CONVEX SIDE.*

BY JOHN O. ROE, M.D., ROCHESTER, N. Y.

The treatment of nasal stenosis, due to deflected septa, consists in straightening the septum, thereby placing it in a normal position, whether it be thickened or not on the convex side. In exceptional cases, however, where the septum is but slightly deflected from the median line, the obstruction of the naris on the convex side may be due quite as much to hypertrophy of the inferior or middle turbinated body as to the bend in the septum, and where the removal of this hypertrophy is sufficient to give ample space for the transmission of one-half of the respiratory current, it may not be necessary, or even advisable to disturb the septum. Such cases, however, are only exceptions to the rule, namely, that all crooked septa which cause obstruction either to one or both of the nasal passages should be properly straightened.

The question, therefore, which naturally presents itself, is, in what way can this, most easily and satisfactorily, be accomplished.

As all familiar with the subject know, a great variety of methods have been proposed, nearly all of which are only adapted to dealing with the cartilaginous portion. The early attempts at correcting deviation of the septum were invariably abortive, because of the failure thoroughly to overcome the elasticity of the cartilage and, accordingly, the removal of the nasal stenosis was attempted by cutting away or punching out the obstructing portion of the cartilage. This was soon discovered to be very bad practice, and was abandoned.

The necessity for overcoming the elasticity of the cartilage was then apparent, and various methods were proposed for accomplishing this purpose: such as the stellated cutting forceps, by Steele; multiple incisions with a knife, by Roberts; incising with scissors, similar to button-hole scissors, having curved blades, by Asch; excising a wedge-shaped piece, by Ingles; the detaching of the base of the deviation beneath the mucous membrane and moving it over toward the open side, by Allen and Watson; while Gleason makes a semicircular incision through the lower portion of the deflection,

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and pushes the angle of the deflection through the opening. Many other minor modifications for overcoming the resiliency of the cartilage have been made by well-known operators: but nearly all fail to take into consideration the deflection of the anterior osseous portion of the septum, with which the deflection of the cartilaginous portion is almost invariably associated: and on this account they find it necessary to maintain the continuous support of the septum for weeks in order to overcome the tendency to recurrence.

The posterior portion of the osseous part of the septum is but rarely deflected, but it is generally recognized, however, that more or less deflection of the anterior portion is associated with deflection of the cartilaginous portion, in about one-third of the cases. But from the careful observation of a great many cases since my attention was called to the subject, I have come to the conclusion that those cases in which this association does not exist are somewhat rare exceptions: and, therefore, in order to bring the septum into a straight line, it is important that the change of the direction of the anterior osseous portion be effected. If this is not done a vertical incision at the junction of the cartilage with the bone is necessary, otherwise the necessity of overcoming the elasticity at this part by continuous pressure is apparent. The difficulty of completely overcoming the *force de resistance* at this point for a long time confronted me, until it occurred to me that fracturing the bone at this point, so that a change may be made in the direction of the septum at the attachment of the cartilage (in the same manner that the direction of the hang of a door is changed at its hinges) would bring about the desired result.

It is especially desirable that this should be accomplished without laceration of the tissues. As Adam's forceps, the only ones then in use for forcibly straightening the septum, were inadequate, it occurred to me that a pair with one blade made in the form of a ring and the other fitting into it would accomplish the purpose. The instruments, as they are now made by Tiemann & Co., are in different sizes and can be so adjusted as to produce any amount of fracture desired. When the osseo-cartilaginous portion of the septum is thoroughly broken up, which is done by slightly rotating the blades, the septum is readily brought to the median line and placed in any position desired, allowing at the same time rotation at the attachment of the cartilaginous portion, which point I wish especially to emphasize. This point, I am sorry to say, is not generally understood, which constitutes the special point in my operations.

A dressing is then inserted in the nostril formerly occluded, to maintain the septum in the median line. This support is ordinarily required for from four to six days, only until the inflammatory and osseous deposits have been thrown out sufficiently to render the fractured portion self-supporting; and, if the elasticity of the anterior portion of the cartilage has been overcome by free incisions, there is no tendency to recur. This may be done according to any of the methods of which I have already spoken for overcoming the elasticity of this portion, according to the requirements of the case. I formerly used Steele's stellate punch so adjusted as to cut through the cartilage only, from one side, leaving the mucous membrane on the opposite side intact. But I have more recently found that it is most easily accomplished by making a vertical and horizontal incision in the shape of a Greek cross through the most curved portion of the septum. These incisions I make with a knife obliquely, so that the two surfaces acting like two wedges will slide past each other, which readily allows for any redundancy of the cartilage, and at the same time allows a portion of the cut surfaces to remain coaptated, which more readily facilitates healing than when the incision is made at right angles to the direction of the septum. An additional incision is usually necessary on the convex side along the lower border of the deflection beneath the mucous membrane. This should be made sufficiently deep to loosen or partially detach the cartilage as proposed by Allen, when the septum can very readily be brought to the median line. In some instances an incision is also required along the superior portion. These incisions should be subcutaneous, or at least the mucous membrane on the opposite side should be left intact. This can be done by inserting the finger in the opposite nostril, by which the approach of the knife can readily be detected.

When all this has been accomplished, a pair of flat-bladed forceps is used, one blade in each nostril, and the septum is placed in position. The parts are then thoroughly cleansed with a bichloride solution, and a cotton dressing is inserted. This I prefer to hard-rubber tubes, pins or other methods of support, for by its use the wound can be maintained aseptic, it is not irritating and thereby promotes the reparative process. (If a support is required for a length of time, as deemed necessary by some operators, hard-rubber tubes or such supports as can be removed, cleaned, and re-inserted by the patient would not only be preferable, but necessary). The cotton is wound around a flat piece of metal until just the size desired, and by saturating it with bichloride solution

and dusting it with iodoform it can be left in place for three or four days before removal. From the fact that all resistance from the septum is gone, there can be no pressure, and it gives the patient, therefore, no special pain or discomfort. Care must be exercised in introducing the dressing, that it be not too large, so as to force the septum over to the other side and thereby cause a deviation in the opposite direction. At the end of the third or fourth day this dressing should be removed, which can be done without pain by allowing the patient to inhale a few drops of chloroform from the handkerchief, while in a reclining posture. The nostrils should be thoroughly irrigated, made aseptic, cocaineized and another dressing, usually somewhat smaller than the first, introduced as a gentle support. At the end of the second day this dressing is removed, and in all ordinary cases no further support should be required; but if it is, I regard the operation as faultily done. The nasal cavity, after this, is to be irrigated three or four times a day until the parts are healed.

Spurs and ridges, exostoses, etc., should usually be removed beforehand by the saw or cartilage knife; although they can be left till afterward, when all irregularities of the septum should be removed.

These, then, are in brief the main points of the method which has given me the best results; and those who become familiar with the use and special advantages of the fenestrated comminuting forceps in these operations for straightening the septum, will, I am sure, find them as indispensable as I do.

28 N. Clinton Street.

General Consideration of Mucous Membranes of the Upper Respiratory Tract—D. BRADEN KYLE—*Int. Med. Mag.*, Vol. viii, No. 1, January, 1899.

This is a thoughtful and instructive article appearing serially. It considers the normal histology and physiology of mucous membranes in general in order to make clear the reflected and dependent lesions. In these days of superficial knowledge such a clear presentation of fundamental principles of pathology has a peculiar and practical value, and the reader is referred to the original.

EXTON.

TREATMENT OF NASAL STENOSIS DUE TO DEFLECTIVE SEPTA, WITH OR WITHOUT THICKENING OF CONVEX SIDE.*

BY ARTHUR W. WATSON, M.D., PHILADELPHIA.

Professor of Diseases of the Throat and Nose in the Philadelphia Polyclinic.

It has always seemed to me that the operation for correction of deflection of the septum should be considered one of the most important in nasal surgery, if we remember how many serious conditions of the respiratory tract are dependent upon nasal obstruction of which deflection of the septum is so frequently a cause. And yet it apparently is not so considered, if we may judge from the superficial treatment which it usually receives in works on diseases of the nose. Yet that the subject has received considerable attention may be inferred from the numerous methods of dealing with this deformity which have appeared from time to time. It is like the obstetric forceps, everyone has his own septum operation, which nobody else uses.

I shall not, however, take the time to consider these various operations, which you all know, but briefly call your attention to some of the more important conditions which we meet with in deflections and the principles which should be applied in overcoming them; and also describe a method of operating which, I think, is based on scientific principles and will give more certain results than are usually obtained.

In the first place, I may ask, what are the conditions to be removed by operation on a deflected septum? This may seem a simple question, but when the various operations which are advocated by the writers on this subject are considered, it will be seen that there is considerable difference of opinion on the question. Deflection of the septum produces obstruction, which is both to respiration and to drainage. It may also produce pressure. A deflection may not interfere to any extent with respiration, but may cause penning up of secretions in the lower meatus or the upper nasal spaces, or interfere with drainage from the accessory sinuses, whenever a deflection is of sufficient degree to necessitate operation one or all of these conditions are present. Now any operation to be successful should remove not only the obstruction

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to respiration but to drainage, and relieve pressure. Thus are excluded all such operations as aim simply to re-establish the passage of air behind the deflected portion, such as punching holes in the septum, removing of angles, etc., and those which deal only with the cartilaginous septum.

In order to operate successfully on any part, and particularly so in regard to the septum, the operator should know what kind or kinds of tissues he has to deal with and the characteristics of such tissues. In the septum we have the broad thin plate of cartilage, known as the triangular cartilage; behind it, and partly below it, the bony vomer and perpendicular plate of the ethmoid. The characteristic of this cartilage is its rubber-like resiliency. It can be bent nearly double without breaking, and again resume its former shape, and this even against considerable counteracting force. The bone, on the other hand, is extremely brittle, and on account of the thinness of the upper and central portion can be molded into shape, one fragment overriding another.

There are also certain other conditions that must be borne in mind in attempting to correct a deflected septum. Such are the following:

A deflected septum is larger, that is contains more tissue, than one which stands straight in the median line. It is therefore absurd, the attachments above and below being fixed points, to force a deflected septum into a straight line and expect it to stay there. Any operation, then, to be successful must provide for eliminating the redundant tissue.

As cartilage unites by fibrous tissue, and fibrous tissue will stretch, it is evident that the resiliency of the cartilage and its tendency to resume its former shape will, by pulling on the fibrous union, stretch it and allow the deviation to be reproduced. A successful operation should, therefore, provide some fixed attachment or support for the cartilage, so that its elastic power could not displace it from its position.

The operation which I am about to describe is based upon the foregoing considerations, and is one which I have used and taught for more than six years, and which I described in 1896 before the American Laryngological Association.

There are two general lines or angles of deflection which may be present, one or both, in any case. One horizontal, running antero-posteriorly and usually low down; the other perpendicular, near the front of the septum. Bony or cartilaginous thickenings when present, are along these angles.

After both sides of the septum have been thoroughly cocaineized, an incision is made through the septum from the convex side; from behind forward, just below the horizontal angle, beginning at the bony septum and carried forward as far as the deflection extends. The cut is made from below upward and towards the opposite side, forming a bevel. If an anterior, perpendicular, angle also exists, an incision from above downward, also bevelled, is made, just in front of the angle, meeting the incision below, so that when the septum is brought into line the edges will slide over each other. If the angle is thickened the thickened portion is removed in the form of a wedge, by means of an incision behind and in front of it.

The whole upper portion of the septum is then pushed over, with the finger, into the opposite nostril. In doing this the lower edge of the upper fragment is made to jump over the lower fragment and hook onto the opposite side of the base of the septum. If the deflection extends back to the bony septum, which is mostly the case, the bone is broken up by Adams' septal forceps and molded into line. The projecting lower fragment of the septum, which represents the redundant and thickened portion, can now be removed by the saw, or if preferred can be left until after the septum has healed.

For making the incisions I use a stout, pointed, tenatome. If hard bone is encountered at any point the upward-cutting saw is used.

In the matter of splints or plugs I am indifferent as in most cases, in this operation, the septum will retain its position without their aid. As a matter of precaution, however, against violence from blowing the nose, etc., I generally place a small pad of gauze (iodoform or nosophen) in the former narrowed nostril. It also serves to prevent hemorrhage. When the incision has been carried far forward and one at right angles also made, the tip of the septum is without support while healing is taking place. In such a case I use a pin, passed diagonally through the anterior fragment, from the concave side, over the perpendicular incision and then diagonally back into the septum behind. The pin has a ring head, covered by a tight-fitting piece of rubber tube, which prevents undue pressure of the head on the septum.

In making the incisions I usually endeavor to preserve the mucous membrane of the opposite side of the septum intact. This is not essential but it is an advantage in several ways, one of which is that it prevents the collection of blood and crusts in the uninjured nostril.

The object of the bevelled incision is to gain as much tissue as possible, downward, as the lower down on the base of the septum the upper fragment extends, when in place, the firmer will be its hold; and to eliminate all of the thickening at the angle.

It does not make any difference whether there is thickening of the convex side or not, as all thickened tissue is left on the convex side as a spur, to be removed by the saw.

In conclusion, I would restate the points of the operation:

1. All the cartilaginous septum down to the angle is utilized to form the new septum.
2. Elimination of the redundancy is provided for.
3. A firm point of support, the bony base of the septum, is provided to counteract the resiliency of the cartilage.
4. Deflection of the bony septum is corrected.
5. It does not transfer thickened angles and redundant tissue to the other naris.

126 South Eighteenth Street.

The Vocational Diseases of the Ear—M. KAHN—*Klinische Vorträge*—II Band, 12 Hett, 1898.

The author divides his subject and treats it under several headings, as follows:

Diseases caused by certain poisons employed in the arts:

Lead, Mercury, Phosphorus, Arsenic, Sulphide of Carbon and Aniline dyes.

These various substances may bring about a gradual diminution in the power of hearing, caused by a serous exudate in the middle ear. Menière's disease sometimes follows chronic mercurial poisoning. Others cause tinnitus and a feeling of pressure.

Diseases caused by compressed air. An interesting description of the caisson disease is given. Divers suffer from practically the same condition.

Diseases caused by sudden compression of air in the external auditory canal and sudden loud noise—explosions. Here is the disease of the soldiers—those who are engaged in naval warfare are advised just before the firing of a gun to practice Valsalva's experiment and to keep the outer ear filled with oiled cotton.

Diseases caused by the influence of prolonged noise—boiler-maker's deafness. This consists mostly of an otitis interna, sometimes catarrhal otitis media, more rarely complicated with labyrinthine trouble. A peculiar condition is brought about by the continued use of the telephone. The condition seems to be hyperesthesia of the acoustic nerve. There are subjective noises, a feeling of pressure, and diminished hearing.

The last division is devoted to the aural troubles of railway employes. Engineers and firemen are subjected to a complicated form of exposure which results in the sclerotic form of middle-ear catarrh.

VITLUM.

TREATMENT OF NASAL STENOSIS DUE TO DEFLECTIVE SEPTA, WITH OR WITHOUT THICKENING OF CONVEX SIDE.*

BY E. B. GLEASON, M.D., PHILADELPHIA.

Deviation of the nasal septum occur in great variety, but the majority involve little more than the posterior, three-fourths of the triangular cartilage and adjacent bone. Hence the breathing space of the unobstructed naris is not increased as the result of a deviated septum. A pathological condition of one or both nasal chambers is commonly produced and not unfrequently when aural disease results it is the ear upon the same side as the wider nostril that first becomes deaf.

The factors that interfere with the success of operations for the correction of deflection of the nasal septum are redundancy and resiliency. Although it is convenient to speak of horizontal and vertical deviations; yet redundancy in all directions must exist in all cases of deviated septa; and in successful operations, this redundancy both in the horizontal and vertical direction must be provided for or utilized.

However, the main factor that interferes with the success of operation for the correction of septal deviations is not redundancy, but resiliency; which for months after the deviation is corrected exerts a force tending to reproduce the original deformity. The resiliency of the septum that interferes with the success of septal operations is mainly in its cartilage; for when bone is fractured, it does not tend to spring back into its original position.

At a meeting of the Section of Otology and Laryngology of the Philadelphia College of Physicians, October 6, 1896, I exhibited five cases of deviated septum operated upon by a method that utilized septal redundancy as a splint and provided for the resiliency of the septum: inasmuch as a U-shaped incision was made entirely about the deviated area except above and the tongue-shaped flap so formed with the finger tip was thrust through the hole in the septum that it covered. The deviated area then became a hanging trap-door with a spring hinge, the tension of which if too great could ordinarily be lessened; and the redundancy, all of which is at the edge of the flap, locked over the hole in the sep-

* Fifth paper of Series read before the Section of Laryngology, New York Academy of Medicine, April 26, 1899.

tum in front, behind and below, and resisted the spring from the neck of the flap tending to reproduce the original deformity.

The operation is best adapted for vertical deviations; because the tongue-shaped flap then is very narrow. As the resiliency is only exerted from the neck of this long narrow flap and hence has a powerful leverage to overcome in order to thrust the base of the flap back through the hole in the septum, the tension is ordinarily just sufficient to hold the parts in firm contact and it is unnecessary in such cases to employ a tube or other means of support after the operation.

In horizontal deflections, the base of the flap is broader and consequently the amount of force exerted by resiliency is greater and unless the amount of redundancy is great it may be sufficient ultimately to force the flap back through the hole in the septum and reproduce the original deformity. This accident is most likely to occur when there is only a moderate amount of deflection and consequently but little redundancy, and also in septa where there is no thickening at the base of the septum or elsewhere at the periphery of the deflection. Such cases hardly amount to 20% of those requiring operation, but they need support by a tube and careful watching in order to secure success. It will be noticed that as the resiliency of the septum is resisted solely by the firmness of the redundancy at the edge of the flap and hole in the septum, beveling does not increase this firmness and consequently cannot be of much avail in preventing a return of the flap into its former position. In cases where it is doubtful if there be sufficient redundancy to resist the resiliency from the neck of the flap, the vertical crura of the U-shaped incision should be extended upward to as high a point as possible upon the septum in order to increase the leverage that has to be overcome in order to force the flap back into its former position. An effort also should be made to fracture the neck of the flap. It is impossible to fracture the neck of the flap when it consists entirely of cartilage, but a thorough bending diminishes the resiliency at least for a time. When the neck of the flap contains bone it is readily fractured with an audible snap and resiliency is diminished in proportion to the amount of bone fractured.

The technic of the operation is as follows: The field of operation is cocainized and then exposed by means of a self-retaining speculum. A thin saw is introduced along the floor of the nose beneath the deviation. The sawing is continued in a horizontal direction until the saw has penetrated somewhat deeply into the tissues.

The direction of the sawing is then rapidly changed to a nearly vertical direction. During the sawing it is of the utmost importance that the saw should be held exactly parallel to the septum; in order that the saw cut shall be *around* and not *through* any part of the deviation.* In cases requiring it the length of the vertical crura of the U-incision are then quickly lengthened by means of a bistoury and the flap is thrust through the hole in the septum with the tip of the fore finger.

While the finger is still in the naris, it is carried up along the anterior and posterior crura in order to be certain that the edge of the flap has completely cleared them and the neck of the flap is then sharply bent. In uncomplicated cases the whole operation can be done with considerable deliberation in two minutes. Should redundancy be excessive, there is no especial objection to removing a portion of it at the time of operation. It is safer, however, to wait for a month or two until the parts are firmly united. It is not necessary to denude the edges that are in contact, as the pressure results in necrosis of at least the superficial layer of the mucous membrane, after which the parts unite. Should nonunion result, the edges may at any time be freshened with a ring ear curette: a simple and painless procedure.

It is well to slip in a tube immediately after the operation and decide twenty-four hours afterward as to the necessity of wearing it. The tube serves to control the usually trifling hemorrhage which, however, may be so excessive as to require the insertion of a large plug of absorbent cotton saturated with peroxide of hydrogen into one or both nostrils.

When no tube is employed, the after-treatment consists in inspecting and if necessary cleansing the parts once a day for a week or ten days, the patient in the meanwhile attending to his usual avocation.

When a tube is employed it is removed and cleaned once in twenty-four hours. If during the after-treatment, the flap is forced back into its former position, it is replaced and retained by adequate support.

The advantages of the operation are its simplicity, there being only one flap to bend, the quickness with which it can be per-

*If the saw passes *through* instead of *around* the posterior portion of the deviation, the deformity will be only partially corrected when the flap is pushed through the hole in the septum, and hence it will be impossible to slip in the long Allens tube which will abut against a vertical ridge. Under such circumstances, this ridge (posterior edge of hole in the septum) may be brought into line with the Adams forceps; or if the redundancy is sufficient to permit it, a portion of the ridge may be removed. If the saw passes *through* instead of *around* the deviation, when the flap is thrust through the hole in the septum, it will be supported by a portion of the septum not in the median line but at a point toward the formerly obstructed naris.

formed and the fact that it entails the minimum amount of suffering at the time of the operation and also during the after-treatment, if no tube be employed. At the hands of even a moderately skillful operator, it yields almost uniformly permanently successful results.

Those who believe as I do, that the majority of septal deviations are the result of traumatism, will perceive that this operation reproduces the original lesion and utilizes the redundancy (provisional callus) as a splint to hold the parts in place.

Primary Epithelioma of the Uvula and Soft Palate—LENNON

BROWN, London—*Scottish Med. and Surg. Jour.*, March, 1899.

The author commenting on Walker Downie's case of primary epithelioma of the uvula, records another presenting very similar features to it, and in addition describes a primary epithelioma limited to the left anterior faucial arch.

Case I. Male, æt. forty-eight, had pain and difficulty in swallowing and had recently become much thinner; he had been a great smoker and a moderate drinker; his father died; after amputation at the knee for sarcoma, his mother had been twice operated on for cancer. The uvula presented a warty, thickened mass, the disease invading the palate. There were no enlarged glands. The tumor was removed with scissors. Microscopic examination showed the growth to be one of epithelioma. The patient died about two years later from rapidly growing secondary growth in the cervical glands.

Case II. Male, æt. fifty-two, had complained of pain on swallowing during the last three or four months. The whole of the soft palate was unduly hyperemic, and a small warty growth occupied the free border of the left anterior faucial arch; there were no enlarged glands. The patient refused to allow of its complete removal, notwithstanding that the microscopic examination of a small portion proved its malignant nature.

A. LOGAN TURNER.

Enlargement of the Laryngeal Tonsil as a Cause of Cough—

BEVERLEY ROBINSON—*New York Med. Journ.*, October 1, 1898.

Congestion, or catarrhal inflammation, and hypertrophy of the laryngeal tonsil are frequently an unrecognized cause of persistent cough and other irritations. In congestion and inflammation local applications of iodine preparations are usually effective. In hypertrophied tonsils, the surgical removal by means of the electro-cautery, the snare or the amygdalotome is required, the author preferring the electro-cautery.

SCHIEFFELGHELL.

TREATMENT OF NASAL STENOSIS DUE TO DEFLECTIVE SEPTA, WITH OR WITHOUT THICKENING OF CONVEX SIDE.*

BY BEAMAN DOUGLASS, M.D., NEW YORK.

Our Chairman has invited me to present to the Section in a paper of ten minutes my personal views of the best method for relieving nasal stenosis due to deflected septa.

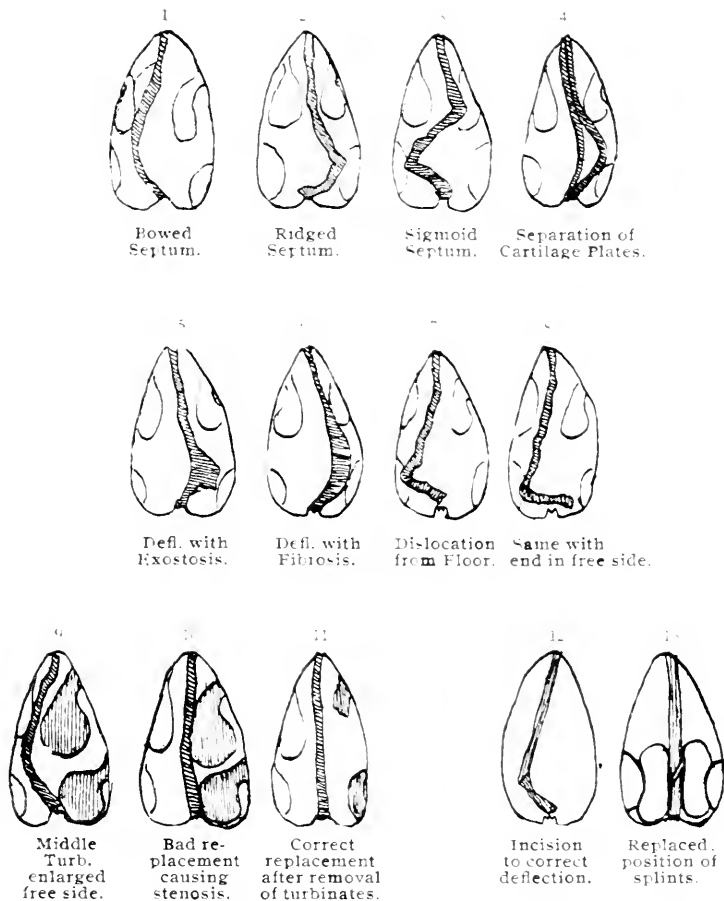
Responding to his invitation I desire to say that a paper covering such a subject in so short a time must necessarily be much abbreviated, rather dictatorial, and represent merely the result of personal experience. Without further introductory remarks, let us plunge into the subject under discussion.

All septa presenting a deviation or deflection from the perpendicular do not require operation. Unless the deflection produces symptoms it should not be treated. Each naris should theoretically have equal breathing space and the septum should divide the nasal cavity into two equal sides. Stenosis from deflected septa is exceedingly common. Zuckerkandl, Vol. 2, p. 2, claims 52.2% of deviations in European, and 26.1% in foreigners. These percentages represent estimates in skulls indiscriminately chosen and not observations in nasal sufferers. In our Throat Clinic at the Manhattan Eye and Ear Hospital (Throat Department) the records in all the nasal cases applying for treatment show 11.3% of deflections which are causing symptoms. This represents more nearly the percentage of septum deflections causing symptoms than the larger estimate of Zuckerkandl.

My paper this evening is to be devoted to the consideration of the relief on only one symptom caused by deflected septa, viz., the cure of stenosis or obstruction to respiration, but many other direct nasal symptoms, and many more indirect conditions in the ear, throat and lung, together with various reflex phenomena throughout the body are relieved by restoring the normal plane of the septum. Septal obstruction, if only enough to deflect the air current should be cured, for it may cause an increased functional activity of other parts of the nasal tissue and may be followed by inflammation with results more disastrous than could be produced from a complete stenosis. In complete stenosis the deflection should always be operated upon.

* Sixth paper of Series read before the Section of Laryngology, New York Academy of Medicine, April 26, 1898.

In the recent cases of nasal stenosis due to deflected nasal septum, the septum is in a freshly fractured or bent condition. The cartilage is bowed or fractured and the mucous membrane may be lacerated by indirect violence. The septum being in a distinctly adjustable condition requires only replacement and support.



Figs. 1-13.—Diagrams representing forms of deflections of nasal septum and operation for its cure

A perpendicular line is obtained by using a periosteal elevator to replace the fragment and a nasal splint, or Bernays' sponge covered with rubber tissue except at the ends, will effectually hold the septum in its corrected position until union results.

The chronic cases are the ones generally coming to the attention of the nasal surgeon and the problem in these cases is to produce a correction of the faulty position by refracture of the deviated septum and replacement in a perpendicular line. In these chronic cases, however, the problem is not so simple because healing has been incorrectly carried out, nutritive changes may have altered the cartilaginous plates, fibrous bands have united the fragments in false but firm position and hyperplastic catarrhal inflammation may have arisen as a complicating condition.

In nasal stenosis from deviated septum the septum is distorted in various ways and either the cartilaginous or bony septum may be involved in the obstruction, and sometimes both. The stenosed side is popularly called the convex side, the free or unobstructed side the concave side. The deflected surface may be evenly convex when it is called bowed septum (Fig. 1), irregularly broken in several lines of deflection called ridged septum (Fig. 2) or deflected first to one side high up and lower down deflected to the opposite side when it is known as sigmoid septum (Fig. 3). Its two cartilaginous plates may separate while deflected (Fig. 4) or the convex side show an exostosis (Fig. 5) or some sub-mucous fibrous thickening (Fig. 6). The cartilage may have been torn from the superior maxillary ridge at the nasal floor (Fig. 7) in which case the free edge may lie in the convex side (Fig. 8) or osseous or fibrous material may have been thrown out at the nasal floor. The free side may contain a large turbinate body, which if not removed prior to the restoration of the septal perpendicular will lie in contact with the septum in the now corrected septal line and simply stenose the formerly free side (Figs. 9, 10 and 11). A further description of these forms of deflection may be found in the *New York Medical Journal* of August 6, 1898, in an article entitled "The Restoration of Deflected Nasal Septum."

Nasal stenosis due to deflected septa may be cured by the following method: The Operation.—The points which should be attended to before correcting the deflection are the removal of exostoses and ecchondroses together with the removal from the unobstructed side of any condition of the turbinated tissues which would form an obstruction to the free side after the septum had been replaced. Before the patient is etherized the nose should be douched with a warm salt solution, a small quantity of peroxide of hydrogen (1-50) may be used to insure absolute cleansing. The patient having been etherized, the finger well oiled, is introduced into the nares. The examination by means of the finger will show

the lines *where the septum has been previously bent or where fracture has taken place*. The finger should discover the ridges which may exist, and should determine whether there are one or more deflections and whether these ridges join each other or are separate. I have seen cases apparently simple where the deflection consisted of a horizontal ridge and joining this at an angle the finger discovered another ridge leading upward and backward which was as much an element of deflection as was that which was discoverable by visual examination. A careful examination of these ridges or convexities forming the deflection will indicate the plan of operation, which is to perforate *the septum at the point of greatest convexity and cut along the lines of deflection in whichever direction they may extend*.

It is of great importance that the examining finger while searching for the deflection should ascertain whether the triangular cartilage joins the superior maxillary ridge or whether the carti-



Fig. 14.—Spear knife.

lage has been deflected or fractured or displaced from this ridge. Having determined carefully the location of the lines of deflection, the knife which I designate as a spear knife (Fig. 14) is introduced into the obstructed side and is carried to the point of greatest con-



Fig. 15.—Blunt pointed bistoury

vexity. The little finger which has been placed in the free side will easily determine when the spear knife is on the deflection, for it can be felt through the thickness of the septum. The point of the knife is then turned and pressed through the septum, thus button-holing it at its greatest convexity, the point being felt as it perforates by the finger in the opposite nostril. An incision about

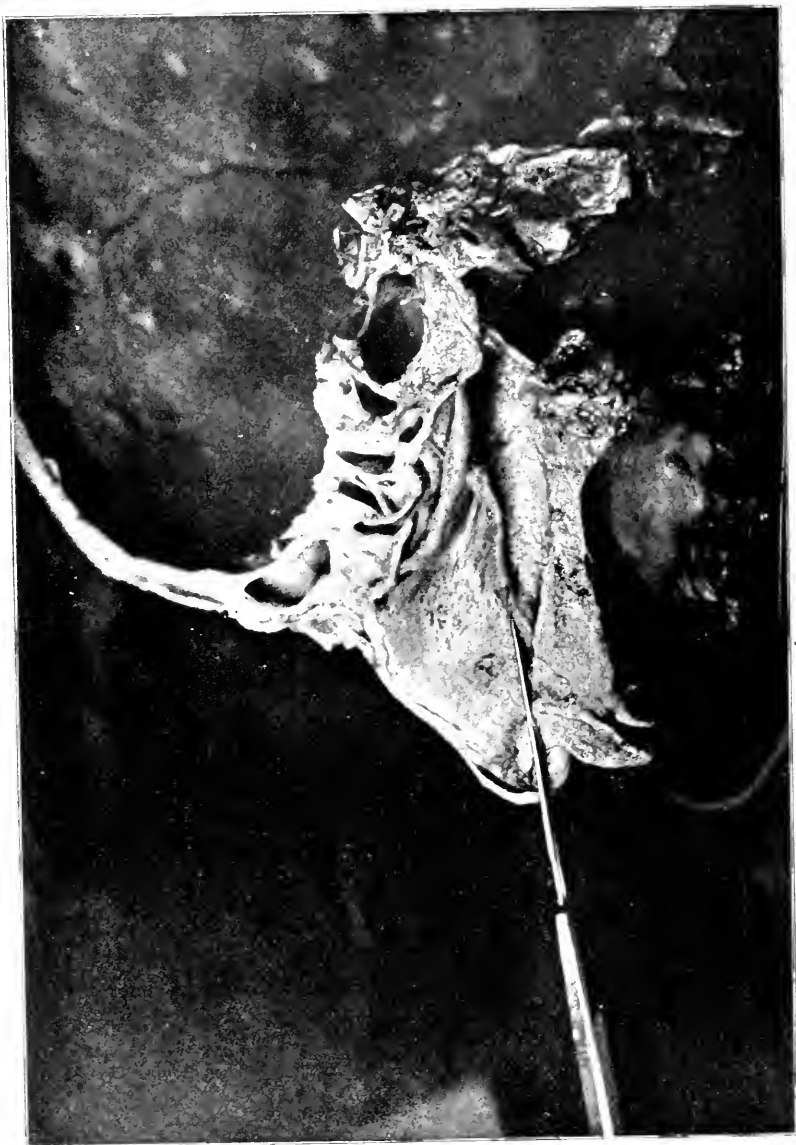


Fig. 18.—Perforating septum at greatest convexity.

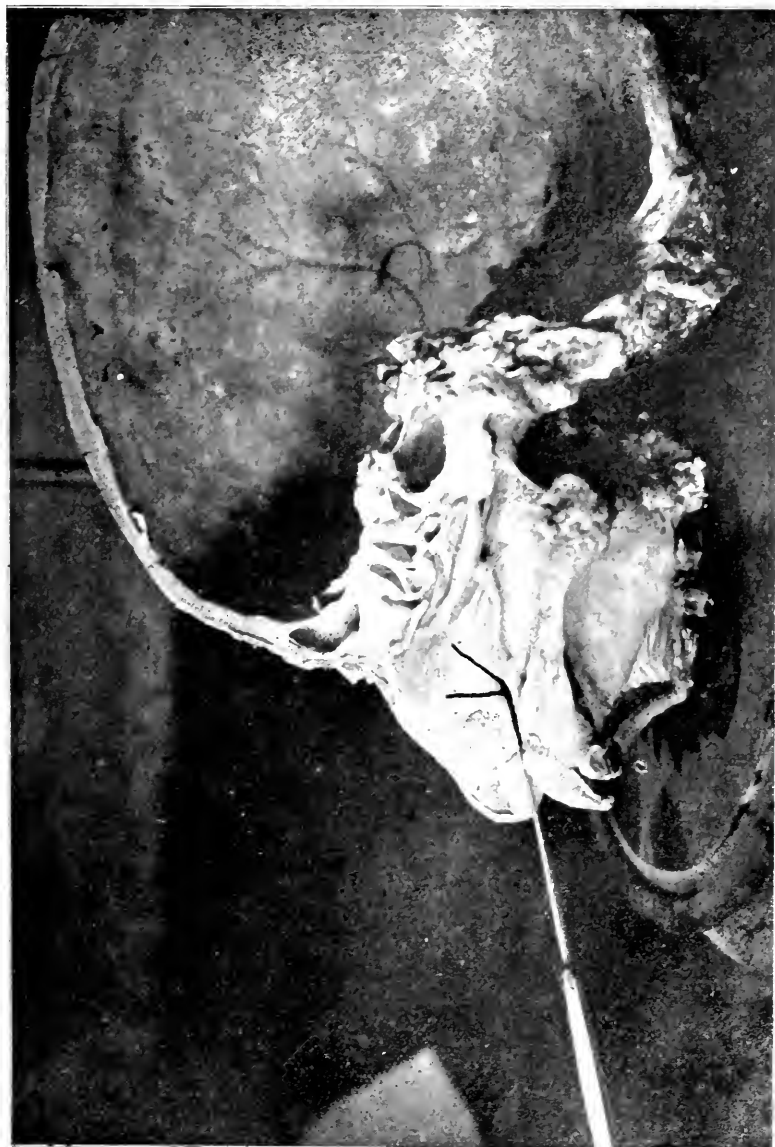


Fig. 19. Knife incising lines of deflection. Several lines of ridges assumed for purposes of demonstration.
Knife has incised forward to vestibule of nose.

$\frac{3}{4}$ of an inch long is then made following the line of deflection and the knife withdrawn (Fig. 18). The object of the spear knife is merely to perforate the septum enough to allow the introduction of a blunt pointed bistoury or a specially devised knife (Fig. 15). This second knife is introduced on the obstructed side into the incision made by the spear knife, the finger in the free nostril again acting as a guide. This knife is drawn forward or backward with a slight sawing motion along the ridge of convexity until it reaches a point which is not deflected. It is usually necessary to cut as far forward as the epithelium and the vestibule of the nose, and as far posterior as the bony septum. The blunt point on the instrument prevents any wounding of the turbinated tissue. If the examining finger discovers deflections joining this main deflection the bistoury should be introduced and these ridges incised in any direction they may extend *until each is cut to its most remote point*. When this has been accomplished the septum will present one or more cuts along the line of deflection and entirely through the substance of the cartilage. This leaves the septum in a thoroughly divided condition along the lines of its distortion. (Figs. 12 and 19).

Ascertain next whether the deflection from the superior maxillary ridge exists: if it does it should be treated in one of two ways: if the deflection at the floor of the nose consists of a displacement of both the *bony ridge* and the *cartilage*, an attempt should be made to break the bone free from its improper attachment with the forceps (Figs. 16 and 20). If the bony ridge is not dislocated with

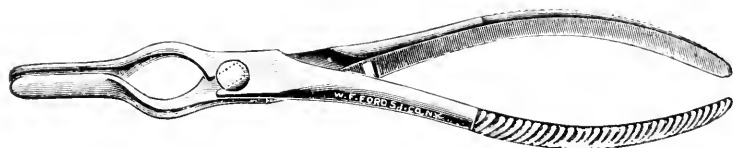


Fig. 16.—Forceps.

the cartilage, but what is more frequently the case *the cartilage has slipped from its articulation* and obstructs near the floor of the nose it is a deflection of the cartilage and should be treated as in the preceding paragraph. The knife introduced at the junction of the cartilage with the vomer and drawn forward horizontally to the epithelial border. The septum presents at this stage one or more incisions: each reduces a deflection and allows the cartilage to as-

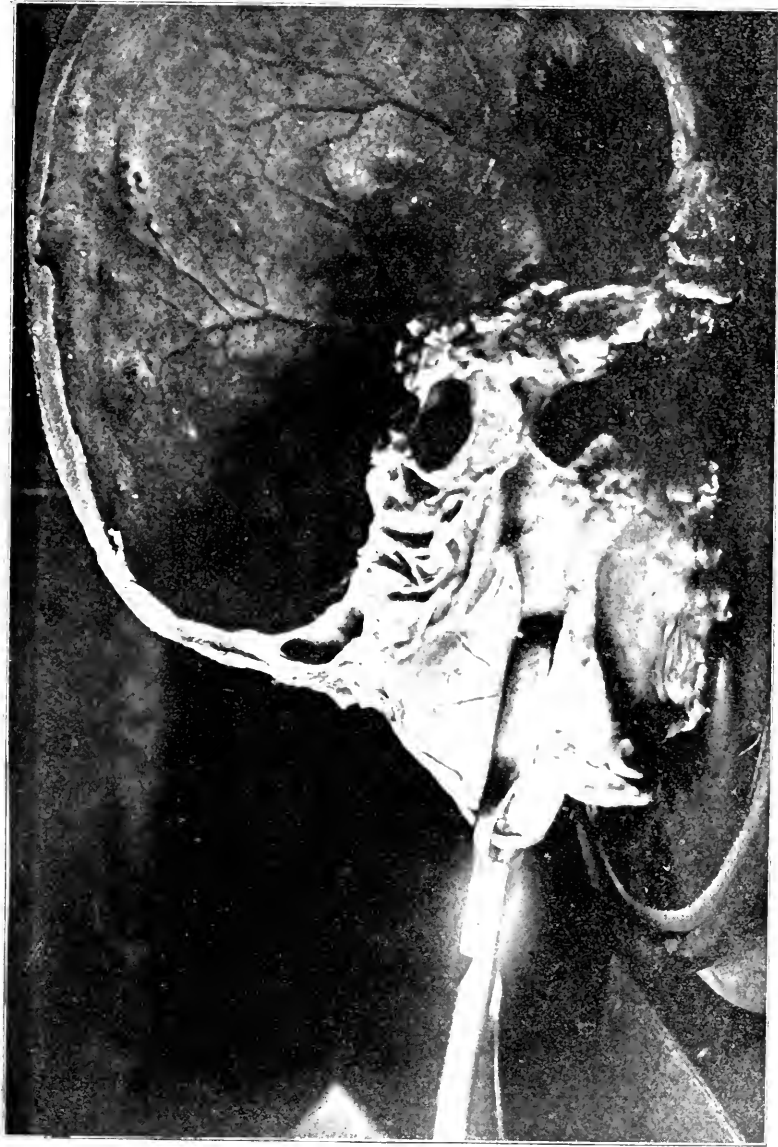


Fig. 20 Position of forceps while fracturing septum from superior maxillary ridge.

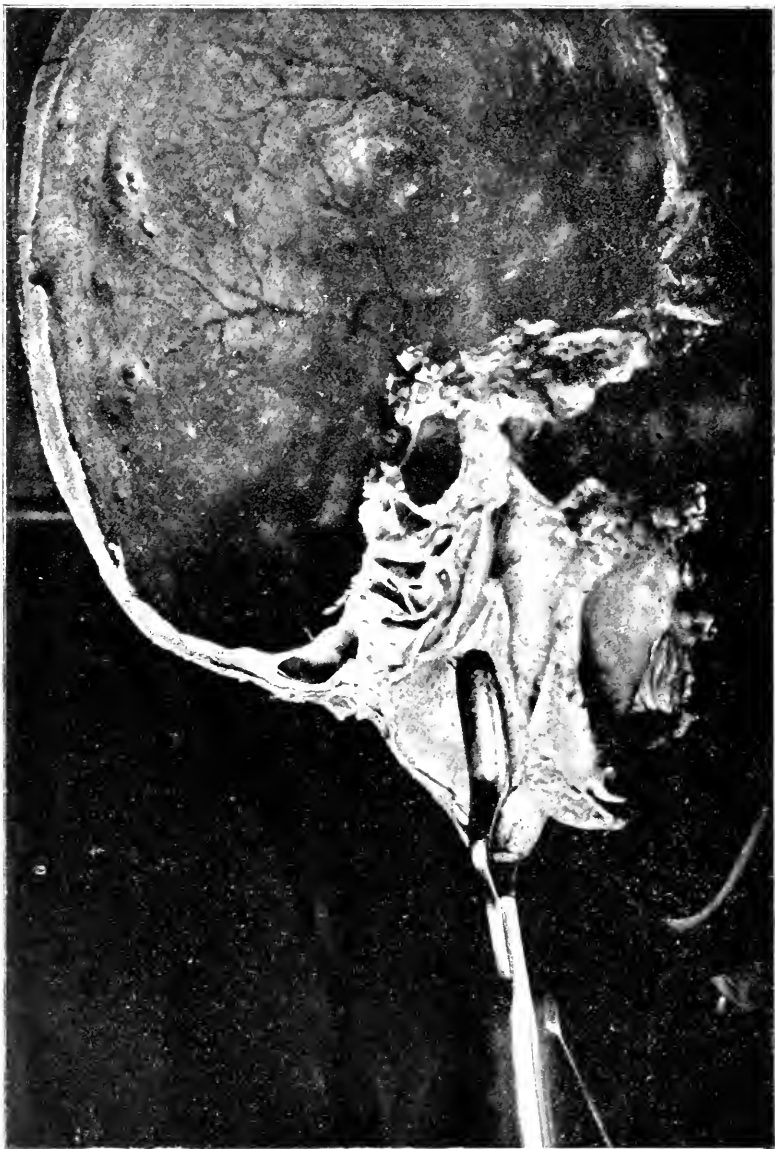


Fig. 21.—Position of forceps while breaking fibrous bands at deflection.

sume a perpendicular line, the incisions allowing the cartilage to be pushed to either side with great freedom.

The next step is the destruction of any elastic bands which may exist in the sub-mucosa as the result of the inflammatory action accompanying the deflection. These adhesions should be thoroughly broken up by introducing the forceps on either side of the septum and quite forcibly twisting the septum with a rocking or rolling motion until all adhesions are thoroughly destroyed and the cartilaginous septum is freely movable. (Fig. 21.) The third point of importance is the bending of the septum *away from the side which has been obstructed*. This causes an overlapping of the cut edges toward the free side and must be done before the splint is introduced. The overlapping is accomplished by introducing the finger into the side obstructed, the overlap occurring on the concave side. The bony septum should now be explored, and if there are prominent deflections these should be broken by the forceps or removed by the chisel. A splint is introduced into each



Fig. 17.—Periosteal elevator

nostril, the largest splint being worn in the previously obstructed side, producing just enough pressure to force the septum a line past the perpendicular; but care must be taken not to press the septum too far over. The second splint in the opposite nostril will assist the other one and help to maintain a correct position of the septum (Figs. 13 and 16.). The after-treatment of these cases is important to an ultimate success. Unfavorable results are almost unknown, if the splints fit properly and are not uncomfortable to the wearer. These splints should not be removed for forty-eight hours unless there is pain, headache, swelling of the nose or secretions which cannot be removed by washing. During the first twenty-four hours the nose should be irrigated twice with a hot normal salt solution. At the first removal of the splints, the septum should be examined and its condition noted. If it bulges to either side it can be replaced by means of a nasal periosteal elevator which I have found useful for this purpose (Fig. 17.).

The broken fragments will easily resume a corrected position and the smaller splint can then be introduced, while the splint is out the nostril should be irrigated and the splint carefully cleaned

with an antiseptic solution. Reintroduce the splint well oiled and see that it holds the septum in proper place. After four days the splint which has been introduced into the side which was unobstructed may be removed and left out, one splint being worn in the formerly obstructed side. This should be removed each day for a week afterwards each second day for cleansing and antiseptic irrigation of the nose. The splint should be worn for two weeks and then it may be left out during the day and worn for one week longer at night only.

Briefly this operation consists of four steps. 1. Button-hole the septum at the point of greatest obstruction, and incise obstructing ridges or convexities in the line of convexity. 2. Break with forceps all fibrous bands and separate cartilage from the superior maxillary spine at the floor of the nose. 3. Overlap cut edges and introduce splints. 4. Treat antiseptically for two weeks.

I claim as advantages for this method over other operations that it restores the *entire septum* to its normal position, corrects slight external deformities by breaking the superior maxillary ridge. It leaves both surfaces of the septum parallel. It is constructed on principles which make it adaptable to all forms of deformities or deflections. No perforations result, no granulation tissue is left behind to curette away after the septum heals, and, lastly, by this method better and more uniform results have been obtained by me than by other methods.

121 E. 36th Street.

Rhinoplasty by an Adaptation of the Flap-splitting Principle—

GILBERT GEOFFREY COTTAM—*Western Medical Review*, January 16, 1899.

The author operated on a boy who lost the end of his nose by the bite of a horse. After the wound healed a transverse incision was made through all of the tissues of the nose five millimeters above the end of the stump. The portion below the incision was brought down to form the end of the nose. The gap resulting was filled in with tissue from the cheeks. The advantage claimed for this method is that moving the end of the stump downward gives a better contour to the nose than could be secured by building up the end of the nose with tissue from the face.

ANDREWS. (BISHOP.)

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, April 26, 1899.

Robert C. Myles, M.D., Chairman.

The Chairman presented a number of specimens illustrative of deformities of the septum:

The Treatment of Nasal Stenosis due to Deflective Septa, with or without Thickening of the Convex Side.

A series of six papers were presented, by the following gentlemen in the order named: Dr. F. H. Bosworth, Morris J. Asch, John O. Roe, of Rochester, Arthur Watson, of Philadelphia, E. Baldwin Gleason, of Philadelphia, and Henry Beaman Douglass, of New York. Dr. Roe being unable to be present, his paper was read by the Secretary.

DISCUSSION.

Dr. Jonathan Wright said that there were so many ways of correcting deviation of the nasal septum that he was reminded of the present state of our knowledge regarding the treatment of pulmonary tuberculosis. He believed that there were certain cases in which no operation would remedy the deviation of the nasal septum. He had operated many times on the septum, with varying success. In children of from eight to twelve years he had found it exceedingly difficult to secure good results because of the difficulty of controlling them during after-treatment. He had never tried Dr. Roe's method, but would suppose that the long interval between the dressings would make it especially adapted for these little patients. Another difficulty that he had encountered, and particularly in children, was the retention of the Asch plug, because behind this wedge-shaped plug swellings of the mucosa occurred, and they tended to push out the plug. He had done Dr. Asch's operation in the larger number of his cases, as he felt that it was well adapted to the majority. Fracturing the cartilaginous septum could not be done, but by using Roe's forceps for breaking up the septum he thought he had been able to more easily overcome the troublesome resiliency. Dr. Roe had insisted that

the principal difficulty was in the deviation of the bony septum, but in his own experience this form of deviation had been exceedingly rare, though the anterior edge of the bony septum was doubtless frequently bent. True, bony ridges and spurs were not so very common on the bony septum; the bony spurs were usually bony deposits on the cartilaginous septum. In a recent case he had, contrary to his usual custom, inserted a tube in the unobstructed side, with the result that the plug had disappeared from that side. There had been considerable swelling, but even after this had subsided no trace of the plug had been found. The operations of Dr. Watson and Dr. Gleason were based on a similar principle, and these operations seemed to him applicable to an angular deviation along the floor of the nose, or anteriorly; they could hardly be applicable to those cases in which there was a uniform bulging over of the cartilaginous septum to one side without any distinct ridge. Dr. Douglass' operation was an ingenious one, but, in his opinion, altogether too complicated for general adoption.

He had been troubled a good deal with cases of frontal sinus suppuration in which the underlying etiological condition had been a deviation of the nasal septum, yet he had not dared to break up the septum, push it back and insert a plug while pus was pouring down from the antrum or frontal sinus. He would like information as to the best way of dealing with such cases.

Dr. J. E. Newcomb said that he did not believe any one operation would meet the requirements of all cases. The Asch operation seemed to fulfill the requirements in more cases than any other single operation, but it was not invariably successful. One common difficulty seemed to be that it was impossible to break up the neck of the flap when the latter was made up wholly of cartilage. As attention to minute details in the after-treatment was very essential to complete success, it seemed probable that the best results should be obtained by those operators having hospital beds at their disposal.

Dr. H. Holbrook Curtis said that accidents occurred in connection with all these operations—inflammation of the middle ear, septic poisoning, hemorrhages, etc. The great trouble seemed to be that we could not see our own failures and bungling. Again, it was one thing to listen to descriptions of technique, and another to see and understand exactly what the originator of an operation actually did. He did not question the good points in all these operations, but personally he was able to make his living and render his patients comfortable by the use of the saw and trephine. He

had recently performed the Asch operation on a small boy, using every aseptic precaution, but two days later there had been some septic inflammation. Dr. Asch would probably say it was because the instruments had not been clean, but in his own mind he was inclined to think that the leaving in of the plug had been responsible for the sepsis. He thought it would be much more instructive to discuss our accidents and failures than our successes.

Dr. Arthur G. Root, of Albany, said regarding hemorrhage as one of the sequelae following operation for deviated septum, that it seemed to him of but little consequence, for he had yet to see a case of nasal hemorrhage that could not be promptly controlled by the use of a narrow strip of iodotorm gauze packed in with a slender pair of forceps. He felt that each of the operations that had been advocated this evening had its advantages in individual cases, yet those present must admit that one of the readers of papers had presented to the profession an exceedingly valuable instrument and method—he referred to the Bosworth saw. He had used the Asch method in his own practice with considerable success, but had modified it somewhat after the manner described by Dr. Douglass. He preferred to cut the septum with a bistoury wherever it might be deflected, and then introducing the Asch plug. He had not been able to completely fracture the severed portions of the cartilaginous septum. He had been fortunate in not having experienced difficulty in retaining the Asch or Mayer splint. It was not well to be at all gentle either in the introduction or extraction of these splints; even though they cause the patient a great deal of pain he would thank you for it in the end. He also believed that deviations of the bony septum were extremely rare. The prime object of an operation upon the nasal septum was to restore normal nasal respiration. If there was a bony ridge on the bony septum it was easy to operate upon it either with the trephine or with the Bosworth saw. In conclusion, he would like to remind those present that the nose was a delicate and much-abused organ.

Dr. Emil Mayer said that one would suppose from this discussion that thousands upon thousands of operations on the septum had been done. He had paid much attention to the relative frequency with which these operations were performed. At the Manhattan Eye and Ear Hospital twenty-nine operations had been done in one year out of 1,401 nasal cases, or a total of 3,000 cases of nose and throat disease. Of these cases, 133 had deflected nasal septum. Ten were operated upon by the Adams' and nine-

teen by the Asch operation. No mention was made of the Douglass operation having been performed then.

In the New York Eye and Ear Infirmary many cases were sent for operation to Dr. Asch and himself and hence the percentage of operations to deviations seen was a trifle higher than those above given. In the past year eighty-seven Asch operations had been performed there. These figures were presented for the speaker remembered that one gentleman reported having performed 3,000 operations for this condition!

Personally, he considered the Asch operation would cure every form of deviation of the cartilaginous portion that he had ever encountered. At one time a comparison had been made with the results obtained in the New York Eye and Ear Infirmary and with other institutions, and it was rather to the credit of that infirmary simply because the cases were not operated upon and then left to the care of the house staff alone.

The question of subsequent hemorrhage or of sepsis had been raised and the speaker wished to say as emphatically as it was possible that in none of the cases operated upon by Dr. Asch or himself had such things occurred.

As regards the tube, he had never had any difficulty keeping them in place. It was impossible to make a tube that would fit every case, and so he had some of his own tubes made shorter and others with the lower end slantingly cut off, so that he had a variety of tubes.

X/ One gentleman has said that he first removes the turbinate on the hollow side before operating. This, in the speaker's opinion, was wholly unnecessary. The hypertrophied turbinated became so because the volume of air pressure was diminished in the cavity, and it was remarkable how small it became upon the correction of the deformity.

Finally, he desired to call attention to the fact that the Asch forceps was meant only as a compressing forceps. The danger of using it, with its tremendous power, with a rocking or rolling motion might be followed by most serious results, like a fatal meningitis for instance.

Dr. Thomas J. Harris thought there was much danger that some of those listening to this discussion, and not expert in rhinology, might go away with a wrong idea of the treatment of these cases. It seemed to him desirable that the simple plan of treatment with the Bosworth saw should be used in the simpler cases, and that the Asch operation and the others should be reserved for the more

severe and complicated cases. He had hoped to hear more regarding the operations of Dr. Watson and Dr. Gleason. The operation by the simple button-hole incision seemed very plausible, and it was certainly extremely convenient because of not interfering with the patient's occupation. His results with the Asch operation had been excellent, and it could not be denied that in private practice it must be looked upon as a formidable one. Dr. Douglass' operation seemed to him only a modification of the principle brought out by Asch, *i. e.* the idea of destroying the resiliency of the septum.

Dr. Beaman Douglass said that he desired to give to Dr. Asch full credit for all that he had done. Dr. Asch had first recognized that the septum could be cut and punctured without the disastrous results previously feared. The appreciation of this fact was a very important step. Dr. Douglass believed in a thorough cutting of the septum. The accidents in connection with these septum operations were: (1) Hemorrhage; (2) sepsis; (3) diffuse cellulitis, and (4) perforation. He had always been able to control the hemorrhage, and had found in this connection the action of peroxide of hydrogen satisfactory. If this application were not sufficient, ice applied to the nose externally was desirable. Sepsis should be guarded against by the observance of well-known surgical principles. Sometimes septic cellulitis would spread to the ear, but fortunately this was very rare, and was not wholly avoidable because it was next to impossible to make the nose surgically clean. Perforation sometimes occurred with any operation, but he had never happened to meet with it in his own cases. He thought his operation was adapted to all varieties of septum deviation, and preferred it to the Asch operation where the deflection was extensive and extended in various directions. The objection to the Watson or the Gleason operation is that the same deflections are not reduced, particularly the sigmoid variety, and dislocations from the floor. His operation left the entire septum perpendicular, which was after all the object to be attained.

Dr. Gleason said that all of the operations advocated this evening were capable of yielding excellent results; if they did not it was the fault of the operator. He liked his operation because general anesthesia and confinement to bed were not necessary. Roberts many years ago had enunciated the principle that the root of the difficulty in septum operations was in overcoming the resiliency of the septum. In his (Gleason's) operation there was only one flap to bend and its base was no wider than its base.

Dr. Watson said that Dr. Douglass could not have understood his operation if he thought that it did not straighten the septum. [All of the straight portion down to the angle is utilized for the new septum, and is fixed in the median line.] The projecting portion is removed with the saw. The posterior edge of the vomer was practically never deflected, but the anterior edge of the combined vomer and ethmoid would be found very frequently deviated, and the middle turbinated was often developed into the concavity, necessitating the breaking of the turbinal before the deflection could be corrected. From the description given in the paper it seemed to him that Dr. Roe had materially modified the technique of his operation. He had never had sepsis follow any of his septum operations, although it had occurred in some of his saw and trephine operations. He could not see that there was any danger attendant upon fracturing the bony septum if it were done with ordinary care.

Dr. Asch said that he had never seen sepsis, hemorrhage or otitis media follow any of his septum operations, and he believed this immunity from such sequelæ was entirely attributable to great care in carrying out the aseptic technique. There should be no difficulty in retaining the plugs if a properly fitting tube were selected. Dr. Roe's operation seemed to him practically the same as his own, except that it was done with different instruments, and that he used a sublimate gauze dressing afterward. The speaker said that he had originally employed this dressing, but found that it caused so much inconvenience to the patient that he had devised the hard rubber tube in its place. He claimed as much credit for this tube as for the operation itself.

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ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

Taking Cold: Its Results and Treatment—JOHN NORTH—*American Medical Compend*, January, 1899.

The author's idea is that the phenomena of "taking cold" are produced by irritation of the ganglionic nerve centers, causing a disturbance of the vaso-motor system, with vascular dilatation. He attributes the irritation of the ganglionic nerve centers to a "lithic diathesis," "oxalic dyscrasia," or to the presence in the blood of "nitrogenous substances formed in the body as the result of bacteriological action." Antikamnia is given as the remedy par excellence.

ANDREWS. (BISHOP.)

Report of Two Cases of Nasal Adhesive-Tissue Stenosis, Congenital and Scarlatinal—ROBERT C. MYLES—*Jour. Eye, Ear and Throat Diseases*, Vol. iv, No. 2, April, 1899.

In the first case a man had congenital occlusion. The atresia was caused by an exostosis which pressed against the posterior end of the

inferior turbinated body. To relieve the condition the author passed the left index finger into the naso-pharynx posteriorly and used a long trephine from the front. The aperture thus made was enlarged with the rongeur. Tubage was used for two weeks, and breathing is now good.

In the second case a woman had never been able to breathe through one nostril after an attack of scarlatina. The adhesive tissue extended from the middle turbinal down to the floor. The anterior wall of the adhesion extended from the vestibule in an oblique direction upward and backward and united with the middle turbinate about midway, the hiatus semilunaris. Muco-pus issued from the respective sinuses. The author trephined along the lower border of the adhesion about half an inch. The gouge and rongeur were used repeatedly for about six weeks and as aseptically as possible.

An aseptic tube was finally passed into the posterior nares.

EATON.

Results of Operation on Nasal Lupus—EDUARD LANG—*Wiener Klin. Wochenschr.*, March 10, 1899.

At a meeting of the Vienna Medical Society, Lang reported the results of eight cases operated on by him. In the case of seven of these sufficient time had elapsed to give some idea of their future. Two of the seven never reappeared. Two returned with a recurrence of the disease. One of these cases showed a recurrence of the trouble at the original site; the other showed lupous nodules situated at some distance from the site of the original lesion. Three cases showed no recurrence at the end of 15 months, 20 months and 3½ years.

VITTUM.

II. MOUTH AND NASO-PHARYNX.

The Etiologic Value of Diseases of the Tonsils in the Pathology of Certain Affections—G. I. KARAGUEOSIANTZ—*Ejenedelnik*, No. 23, 1898.

In forty-three cases of pseudo-membranous inflammation of the pharynx, there were five complications, consisting for the most part of acute articular rheumatism. Among the cases of angina, the author has seen one case of icterus and one of pleuritis. To prevent possible complications, he advises in angina the administration of salicylate of soda in medium doses.

SCHEPPEGRELL.

Hypertrophy of the Pharyngeal Tonsil and Its Relation to Ear Troubles—H. BERT ELLIS—*South. Cal. Practitioner*, Vol. xiv, No. 4, April, 1899.

A clear and complete presentation of the subject addressed to the general practitioner, giving symptoms, appearances, pathology and treatment. The use of bromid of ethyl is commended for operation.

EATON.

Chronic Hypertrophy of the Pharyngeal Tonsil (Adenoids in Children—RICHMOND MCKINNEY—*Memphis Med. Journ.*, April, 1899.

Historical data relating to the discovery of this disease is given. In the author's experience the consistence and histologic structure differ markedly in the child and adult. He finds that adenoids exist just as frequently in Southern states as in Northern climates. A Gottstein curette, followed by the finger nail, is the method employed for the removal of the tissue. Chloroform is used by the author as the general anesthetic.

LEDERMAN.

Adenoid Vegetations in the Adult—P. HELLAT—*Revue Hebdomadaire de Laryngologie, etc.*, Jan. 28, 1899.

The author refers to the possibility of the existence of adenoids in adults, with a report of his personal experience with this subject.

SCHEPPEGRELL.

Tertiary Bucco-Pharyngeal Manifestations in the Aboriginal Algerians—F. CREUTZ—*Revue Hebdomadaire de Laryngologie, etc.*, Jan. 28, 1899.

Tertiary syphilitic lesions in general and bucco-pharyngeal in particular are very frequent in the syphilized of the aboriginal Algerians, about 21 per cent. according to available statistics. The author believes with Prof. Gémy that the syphilis of the aborigines is of a severer type because it is not mercurialized, that is to say, not attenuated, and that it becomes aggravated in the unhygienic surroundings in which the natives live.

SCHEPPEGRELL.

Five Rare Cases of Tuberculous Ulceration of the Soft Palate and the Adjoining Soft Tissues—E. D. SMITH—*N. Y. Med. Jour.*, Feb. 11, 1899.

It is probable that the greater number of these cases is secondary to tuberculous infiltration of the lungs, and that the soft palate and its neighboring tissues are affected by the tuberculous excretion from the lungs. A few cases are doubtless primary and follow from tuberculous dust coming in contact with an abraded mucous membrane.

The first case, a woman of thirty years, also suffering from pulmonary tuberculosis, had the soft palate, anterior and posterior pillars of the fauces, tonsils and corresponding parts of the sides and posterior walls of the pharynx thickly studded with miliary tubercles. Some of these were ruptured and in others the process was not yet complete. Within a few days the ulcers had coalesced, the parts presenting the appearance of a continuous ulcer of a dirty grayish-white color. Under the application of lactic acid and glycerin the ulcer cicatrized. The patient died on the ninth day from exhaustion.

The second case, a man of thirty years, also suffering from tuberculosis of the lung, had the soft palate, uvula, a part of the anterior and posterior faucial pillars studded with minute tuberculous ulcers. The same applications were instituted. The patient is still under treatment.

The three remaining cases are of the same character and were treated in a similar manner. They all reacted well to the local application, but are still under treatment. SCHIEPPEGRELL.

III. ACCESSORY SINUSES.

Mucocele of the Ethmoid Cells Simulating an Orbital Tumor—

F. C. HOLT, Chicago—*Jour. of the Am. Med. Assoc.*, April 1, 1899.

If, in inflammation of the ethmoid cells, the secretions cannot escape into the nasal cavity on account of occlusion of the natural outlets, the imprisoned fluid will exert considerable pressure upon the bony walls and cause them to expand. The very thin orbital wall of these cells is especially apt to yield to this pressure and to form a round, slowly growing tumor behind the inner canthus, which causes more or less marked displacement of the eyeball. In some of these cases the cystoid nature of the tumefaction was readily revealed by the fluctuation; but in some instances the tumor appeared so firm and hard that in the absence of fluctuation it was mistaken for a solid neoplasm. In the treatment of these cases free communication of the ethmoid spaces with the nasal cavity should be established, which is best accomplished by breaking down the nasal partition at the lowest point of the ethmoid spaces and inserting a drainage tube for a few weeks.

Judging by the very few cases on record, ethmoid mucocele protruding into the orbit seems to be a rather rare occurrence, and the author therefore reports an additional case—the only one he has observed in twenty-five years—with operative procedure as given above, after treatment of daily irrigation with boric acid, and a good result in four weeks after the operation. MACLEAN.

Disease of the Frontal Sinus—ADOLPH O. PFINGST—*The Med. Age*, March 10, 1899.

The most common form of inflammation of the frontal sinus is that accompanied by a serous exudation, the simple catarrhal inflammation. The headache so frequently occurring in connection with a cold in the head is often due to an accumulation of fluid in the frontal sinus. He presented a patient in which a spontaneous perforation of the bone and the soft parts had taken place immediately under the supraorbital ridge, a little interior to the middle of the orbit.

Exceptionally, the fluid collecting in the frontal sinus is a very thick, dark brown, stringy mucus (mucocele.) He observed two such cases in his service in Knapp's Hospital in New York. They usually

run a slow course with little or no symptoms, causing by their pressure an absorption of the supraorbital plate, and perforation of its thinnest portion at the inner and upper angle of the orbit, and forming a soft swelling which displaces the eye outward.

The common methods of detergent, antiseptic treatment of the nasal fossæ are referred to as sufficing the mild, simple catarrhal attacks. The poultice is recommended to give relief from pain in acute abscess. The cavity must be opened from without and thoroughly cleansed, and communication with the nose must be established for the purposes of drainage. The operation of Ogston and Luc is preferred, opening the sinus above the supraorbital ridge. The incision is made along the border of this ridge from the supra-orbital notch to the median line down to the bone. Another incision extends from this one up the median line from the nose for about one to one and one-half inches. The resulting triangular flap is everted, and a button of bone is removed with a trephine close to the median line. The cavity is then cleansed and freed from any granulation tissue, the frontal sinus duct is probed and enlarged, and a self-retaining rubber catheter is inserted and the wound is closed with sutures.

BISHOP.

IV. LARYNX AND TRACHEA.

The Injurious Effects of Forced and Unnatural Breathing upon Voice Production, as an Art, and upon the Health of the Individual—CARL SEILER, SCRANTON, Pa. *Pennsylvania Med. Jour.*, April, 1899.

In a classic paper upon this subject, the author states that man deviates more and more from nature, as the progress of civilization advances.

Voice production in speech or song is the result of the combined co-ordinate action of a number of different organs. He likens the human voice to a church organ with its wind-chest filled with air and pipes, representing the lungs and wind-pipe, together with the larynx and vibrating cords.

Three factors which operate in voice production, are the mind of the singer; the larynx with its tone production, in connection with the resonant cavities of the trachea, the pharynx, the mouth and the nasal cavities, and finally the lungs with the mechanisms complex in their action as the steam engine or water motor for producing the necessary air pressure.

The more regular sound waves are the more musical is the sound heard. The sound waves within the resonant cavities are known as "stationary waves." The whole volume of air in the respiratory channel in the act of singing or speaking becomes a self-sounding body, similar to a vibrating string or air contained in a drum. Anything interfering with the perfect co-operation of the different parts of the vocal apparatus, will cause a diminution in the loudness of the vocal sound, and in its musical qualities.

LEDERMAN.

Nine Cases of Laryngeal Spasm—CL. BERNOUD—*Revue Hebdomadaire de Laryngologie, etc.*, Feb. 11, 1899.

The cases reported present the usual characteristic symptoms. The author believes that the cause is a peripheral excitation of the superior laryngeal nerve. SCHEPPEGRELL.

Intubation of the Larynx—B. F. CHURCH—*Southern Cal. Practitioner*, Vol. xiv, No. 4, April, 1899.

The method of intubation, as described by Dr. W. K. Simpson, is quoted, and also the method of extraction of Dr. Dillon Brown, by means of a wire loop attached to the upper posterior part of the tube which is engaged by a hook fixed to the right index finger by a metallic band. EATON.

V. EAR.

A Case of Double Auricular Canal—GURANOWSKI—*Revue Hebdomadaire de Laryngologie, etc.*, January 14, 1899.

In a man of twenty-nine years, the author found in the right ear a partition formed of skin and a cartilaginous plate. This wall extended backwards and downwards, dividing the auditory canal into two parts, posterior and anterior, the former terminating in a cul-de-sac, the latter forming the auditory canal proper, with the tympanum at the end. The auricular pavillion appeared normal. The author considers it a unique case. SCHEPPEGRELL.

Myringitis Bullosa Hemorrhagica Acuta—JAMES J. CARROLL—*Jour. Eye, Ear and Throat Dis.*, Vol. iv, No. 2, April, 1899.

This affection, originally named by Politzer, is an acute, primary idiopathic affection of the drum membrane, very rare in its pure, genuine form, but more often observed as a sequel or concomitant to influenza. The author finds the most interesting feature to be the pathological appearance of the membrana. The first change is a hyperemia of the external layer, soon followed by an effusion into this tissue and the formation of blisters, the latter appearing within a few hours after the beginning of the inflammation. They are short lived, and should the examination be made after the blisters have broken the typical appearance will not be observed. Their contents may be serum or blood, or both mixed. The desquamated epidermis is usually soon replaced, the injection of the manubrium and membrane soon disappears, but slight cloudiness of the drum and the ecchymotic spots may remain quite a while.

The power of hearing is little or not at all impaired. Pain is sharp, stinging, piercing and may be severe enough in children to induce convulsions.

The prognosis is good, the disease usually running its course in from three to eight days. Treatment is mild and palliative. Cold

applications either by the Leiter apparatus or by ice bags may be used. Ear drops of 5 per cent solution of cocaine or 2 per cent solution of morphia or simple warm water are indicated if the pain is very severe. The blisters, whether serous, or sero-sanguinous, may be left to become absorbed or to break of themselves.

If incision should be attempted, the exercise of skill is necessary that the entire membrana may not be perforated, lest infection be carried into the tympanic cavity. Illustrative cases are given.

EATON.

Acute Catarrh of the Middle Ear—E. B. GLEASON—*The Med. Bulletin*, April, 1899.

Pain is the prominent symptom, together with impairment of hearing. Simple inflammation of the drum-head is rare. It usually exists with middle ear inflammation. For the relief of pain the author recommends an ointment of 10 per cent of cocaine in lanolin, as a watery solution of the drug is not readily absorbed by the skin. Lanolin is not prone to become rancid and is more readily absorbed than other oily preparations.

The application of leeches behind, below and in front of the auricle may offer some relief from the pain.

A 4 per cent solution of cocaine applied to the posterior ends of the turbinals sometimes gives considerable relief to the aural pain. Gentle use of the Politzer bag in acute conditions may relieve pain, while violent use of same increases this symptom. The author employs chloroform vapor in such inflations. Sometimes one or more attempts are necessary before inflation is accomplished, as the manipulation should be very gentle.

When the otorrhea is scanty the canal is packed loosely with iodoform gauze (capillary drainage). If the discharge is profuse, some antiseptic is necessary, such as peroxide of hydrogen. The Politzer bag is also employed to gently empty the middle ear where the secretions are retained. Boracic acid is recommended as a drying powder.

LEDERMAN.

A New and Simple Method of Closing Persistent Perforations of the Drumhead—FELIX PELTESOHN—*Berliner Klin. Wochenschr.*, April 17, 1899.

This paper is written with the object of spreading the general knowledge of Okuneff's method of cauterizing the edges of drum-head perforations with trichloroacetic acid. Remarkable results are given; the percentage of cures being high, and very large openings closing down with a very small scar. The author applies the remedy by means of a minute pledget of cotton wound on an aural probe. This is moistened with a drop of the liquified concentrated acid and applied to the edges. As explaining its action, Peltessoehn thinks that the first action of the acid is to destroy the redundant pavement epithelium which lies heaped up along the edges of an old perforation, and which offers a mechanical obstacle to the extension of the tenderer and more highly organized tissues behind it. VITTM.

Chronic Purulent Otitis Media—J. W. MURPHY—*The Cincinnati Lancet-Clinic*, March 4, 1899.

One-sixth of all ear cases fall under the head of chronic otorrhea. Middle-ear suppuration is a standing menace to the life of the patient. The author saw in Schwartz's clinic the skull of a boy of thirteen in which the suppuration had caused the erosion of the bony wall of the lateral sinus, and sudden death had followed a rupture of the sinus. There had been no symptoms beyond a purulent discharge from the middle ear. When the inflammation extends along the nerve sheaths it is more apt to give rise to lepto-meningitis than to brain abscess. The bacilli found in the naso-pharynx may readily pass up through the Eustachian tube, producing an inflammation of the middle ear. This is the course of most middle-ear inflammations.

If all sources of fresh infection can be removed, these micro-organisms tend to die out. In children adenoid vegetations in the vault of the pharynx are generally the primary cause of otorrhea, and their removal is demanded. If proper attention is given to the removal of obstructions about the pharyngeal end of the Eustachian tube the discharge will usually disappear. In occasional cases the mastoid operation is necessary.

Six cases of otorrhea are reported which he had been able to keep under observation from three to five years, during which there was no return of the discharge. In all of these cases the discharge had promptly ceased after removal of nasal and pharyngeal obstructions and of aural polypi where such existed. The hearing was improved in each case.

A patient was exhibited by the essayist before the Academy of Medicine of Cincinnati, illustrating a facial paralysis and an opening of the horizontal semicircular canal, caused by otorrhea of ten years duration. The discharge was from the right ear, but caused no pain until about the 1st of October, 1898, when the patient began to complain of pain on the right side, especially after retiring at night. One morning the mother observed that one side of his face was paralyzed, and that the boy staggered toward the side of the affected ear. A mastoid operation was performed, and revealed the middle ear filled with granulation tissue, and the surrounding bone was soft and necrotic. The head of the hammer and the body of the anvil were present, but both long processes were gone. When the granulations were removed, the Fallopiian canal was found to be eroded, and the facial nerve was destroyed at that point. A small black spot above the oval window proved to be the eroded horizontal semicircular canal.

Recovery after the operation was prompt. At first there was staggering toward the right side, but this has disappeared. The facial paralysis still persists. The primary cause of the ear disease was believed to be the enlarged tonsils and the adenoid growths in the vault of the pharynx.

BISHOP.

Otitis—HUGH BLAKE WILLIAMS, Chicago, Ill.—*The Aka-kōkai Clinic*, January, 1899.

The more I see of chronic suppurative inflammation of the ear, the more convinced do I become that the element of chronicity is due to lack of thoroughness in treatment. The method of procedure mapped out below will not succeed in cases where necrosis has occurred, but in all others it will reduce the duration of treatment from months and weeks to days.

The patient is placed upon the side with the affected ear up. The concha is filled with Marchand's hydrozone, which is allowed to remain until it becomes heated by contact with the skin, when, by tilting the auricle, the fluid is poured gently into the external canal. The froth resulting from the effervescence is removed with absorbent cotton from time to time and more hydrozone added. This is kept up until *all* bubbling ceases. The patient will hear the noise even after the effervescence ceases to be visible to the eye.

Closing the external canal by gentle pressure upon the tragus forces the fluid well into the middle ear, and in some instances will carry it through the Eustachian tube into the throat. When effervescence has ceased the canal should be dried with absorbent cotton twisted on a probe and a small amount of pulverized boracic acid insufflated.

The time necessary for the thorough cleansing of a suppurating ear will vary from a few minutes to above an hour, but if done with the proper care it does not have to be repeated in many cases. However, the patient should be seen daily and the hydrozone used until the desired result is obtained.

In children and some adults the hydrozone causes pain, which can be obviated by previously instilling a few drops of a warm solution of cocaine hydrochloride. In this note it has been the intention to treat suppuration of the ear rather as a symptom and from the standpoint of the general practitioner.

“Experiences” Gleaned from Eye and Ear Practice—E. C.

ELLEFI—*Denver Med. Times*, Vol. xviii, No. 4, October, 1898.

Acute inflammation of the middle ear, chronic otorrhea and mastoid disease are the subjects considered in this paper, the merit of which consists in a résumé of the leading features of treatment of each according to the best authorities at the present time.

EATON.

Experiments upon the Semi-Circular Canal of Pigeons—TRIFI-

LETTI—*Revue Hebdomadaire de Laryngologie, etc.*, January 7, 1899.

An interesting series of experiments, the results of which seem to confirm the investigation of Goltz, Mach, Brener and Cyon.

SCHEPPEGRELL.

Classification and Prognosis of Cases of Long-Standing Deafness L. E. WHITE—*Jour. of E., E. and T. D.*, April, 1899.

As there are numerous exceptions to the general statement that the prognosis is favorable in an inverse ratio to the duration and degree of deafness, the author has classified the chronic cases so as to show those in which an improvement may reasonably be predicted as follows: 1. Chronic suppurative and the effect of chronic supuration. 2. Chronic catarrhal. 3. Chronic secretory catarrhal. 4. Adhesive catarrhal. 5. Insidious. 6. Labyrinthine. Chronic cases are those of over five years' duration.

In the chronic catarrhal the trouble starts in the nose or nasopharynx, or both, in the secretory catarrhal cases there is, or has been, a closure of the Eustachian tube, and the result is an accumulation of fluid in the middle ear and sudden deafness. The adhesive is but the later stage of one or the other of the preceding classes. In the insidious cases there is usually no catarrhal trouble, the Eustachian tube is free.

In distinguishing between the adhesive, insidious and labyrinthine the hearing tests are all-important for prognosis. Of these the voice is the most valuable, and the whisper, uttered after expiration, is that part of the voice on which most reliance can be placed.

The author has devised an ingenious and useful hearing chart, and illustrates its use and his classification by illustrative cases

EATON.

The Function of the Auditory Apparatus in Old People—BOGDANAV-BERESOSKI—*Revue Hebdomadaire de Laryngologie*, January 7, 1899.

The observations of the author were made in 136 men and 86 women of an age from fifty years and upwards. Quantitative loss of hearing was demonstrated in the hearing of old people compared with that of middle age. The diminution of hearing commenced after adult age, and in old age it developed rapidly and so regularly that a table of presbycusis could be prepared similar to the presbyopia of Donders.

In general, the hearing of old men is not as good as that of old women. The diminution of hearing in old age results principally from the alterations in the internal and not in the middle ear. In the latter, affections develop more rarely in old people than in young subjects.

SCHEPPEGRELL.

Can there be Hearing Without the Labyrinth?—MAX KAMM—*Klinische Vorträge aus dem Gebiete der Otologie und Pharyngorhinologie*, Band iii, Heft 3, 1899.

The first pages of this monograph are taken up with a description of Ewald's experiments on pigeons. He removed the labyrinth, and after waiting until the birds had presumably recovered from the operation, he subjected them to various tests; and became firmly convinced that under certain circumstances they were able to hear certain sounds. This ability to hear he attributed to the ability of

the acoustic nerve to receive vibratory impressions (imperfectly, to be sure, but still unquestionably) in much the same way as they are received by the hearing apparatus proper and to convey them to the auditory center.

Ewald's views were combatted by Bernstein and Matte, of Jena. They, too, subjected pigeons to the same operation, but could get no evidences of reaction to any kind of noise. When they removed only the cochlea, there were evidences of slight power to hear, but even this was lost when the whole labyrinth was destroyed. Other experimenters began working along the same lines, and it was pretty definitely determined that the reactions shown by Ewald's pigeons were due to impressions upon other sensible nerves in various parts of the body. Numerous authors have reported cases where slight hearing remained after necrosis and exfoliation of the bony labyrinth.

A careful scrutiny of these cases, however, leads Kamm to the belief that either errors were made in applying the tests or else there were some remaining portions of the labyrinth which were still able to perform their functions.

The paper closes with the following conclusions:

1. After experimental destruction of both cochleae in pigeons there remains a partial ability to hear.
2. After experimental extirpation of the whole labyrinth, no conscious hearing remains.
3. The auditory reaction of the animals in Ewald's experiments depends upon irritation of the sensible nerves of other peripheral organs.
4. It is physiologically conceivable that in human beings some trace of hearing might remain after destruction of the cochlea only.
5. Clinical observation makes it probable that total deafness follows necrosis of the labyrinth.
6. The cases that seem to contradict this are probably due in part to some remains of the labyrinth which are in condition to perform their function, and in part to faulty observation.

VITRUM.

The Role of the Specialist in Deaf-Mute Institutes—JOUSSET—

Revue Hebdomadaire de Laryngologie, etc., Jan. 7, 1899.

Many institutes for deaf-mutes are under the professional care of general practitioners, who are unable to give the necessary attention to the affections from which the patients are suffering the most. In a group of twenty-two children, five were decidedly benefitted by proper treatment of the ears, three of these improving sufficiently to hear an ordinary conversation.

The subjects without ordinary intelligence should be placed in a class by themselves and educated by means of signs, writing and the oral method. Of the remainder, those of marked intelligence should be instructed in the oral method, and the method of acoustic exercises when there is a remnant of audition. Deaf-mutes of medium intelligence should be taught by the oral method alone. Those of very little intelligence form a more difficult undertaking. They should be taught by signs, writing, images, and later by the oral method.

SCHIEFFELGRIFF.

Facial Paralysis of Otic Origin—E. J. MOURE—*Revue Hebdomadaire de Laryngologie, etc.*, Dec. 17, 1898.

Facial paralysis due to an old otorrhea is usually caused by compression of the nerve by fungus growths or a sequestrum. It is only very rarely that it is possible to determine the point of compression. Electric tests are not to be depended upon. It is not necessary to search for the nerve. Open the mastoid cells, scrape, curette, resect and extirpate every scrap of diseased bone, especially in the region of the Fallopian tube. Do not pay any attention to the nerve except to avoid injuring it; removing the compression will prove sufficient. The author concludes, insisting upon the immediate suture of the retro-auricular incision without leaving the slightest solution of continuity by which infection might enter.

SCHEPPEGRELL.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

The Serum Treatment of Diphtheria—W. CHEATHAM—*Southern Practitioner*, March, 1899.

The article recommends this form of treatment and discusses the objections urged against its use, such as the fatal cases reported in some instances, the increase in the number of cases of paralysis and nephritis after its use; that the antitoxin has an unfavorable effect upon the blood, decreasing the number of red corpuscles; that it increases the temperature and disturbs the circulation, and that it has not lowered the death-rate of diphtheria.

SCHEPPEGRELL.

The Local Treatment of Diphtheria—EX.—*Semaine Méd.*, Jan. 18, 1899.

The author, who finds it impossible to always obtain diphtheria serum when needed, has been so successful with the local treatment that he has lost only three patients out of 197, a mortality of 1.52 per cent. His method is the simultaneous use of trichlorid of iodine, which Behring and Kossel recommended for syringing the mouth in diphtheria, sodium sozoiodolate, sulphur and ferric chlorid. The formula for the gargle is as follows:

Rx	Trichlorid of iodine	5 gm.
	Distilled water	500 gm.
	Saccharin	50 gm.

M. Dilute with 10 parts of water and gargle ten times per day.

Insufflate into the nose and throat after each gargle a powder composed of sodium sozoiodolate 5 gm., sulphur 15 gm. Administer in addition 15 to 40 drops of ethereal tincture of ferric chlorid four times per day.

SCHEPPEGRELL.

The Diphtheria Bacillus in the Organs—EX.—*Revue Gen. de Path. Int.*, January 5, 1899.

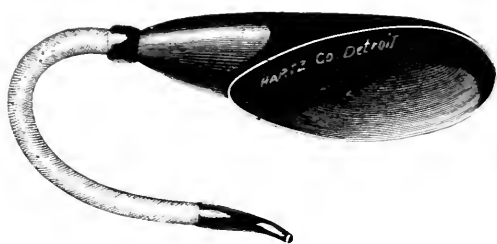
Some recent research establishes that the Loeffler bacillus does not penetrate much beyond its entering point, and that it does not find its way into the blood and organs, except when it is associated with the staphylo or streptococcus. In this case, it is found in the blood and organs in abundance. These facts confirm Barbier's theory that the diphtheria bacillus does not find a ready foothold in man, and that it requires a soil prepared by some other infection. The importance, therefore, of keeping away from diphtheritic infection, persons already affected by some other infection, becomes more and more evident by these later researches. When the streptococcus is associated with the diphtheria bacillus, the general condition is serious: there are apt to be cardiac accidents, very rapid and irregular pulses; the patient has diphtheria and also septicemia. The local treatment should be energetic and serum injected early and often.

SCHEPPEGRELL.

VII. INSTRUMENTS AND THERAPY.

A New Hearing Device EMIL AMBERG, Detroit—*Physician and Surgeon*, March, 1899.

The author suggests a new hearing device, which allows the use of a large number of sound waves. In reaching this purpose a large receiver cannot be avoided. In a great many cases it will be possible to make use of this device from a distance, that is, in church, et cetera.



Although the instrument is large in size, it is not very noticeable as it is held in the lap. Attention has also been paid to the form of the tip. Instruments of this kind have to be tried by the patients, and ought to be modified for the individual.

The illustration is taken from the instrument and is about one-seventh of its size.

Protargol in Rhino-Laryngological Practice—A. ALEXANDER—*Archiv für Laryngologie*, Band ix, Heft 1, 1899.

After a description of the remedy and a brief sketch of its literature, Alexander gives his own experience. In acute cases of all

kinds he finds protargol worthless. It exerts no apparent influence over any of the acute inflammations (tonsillitis, pharyngitis, laryngitis), although it was given a fair trial in many cases. In chronic disorders, on the other hand, it seems to be of great value. Chronic pharyngitis and atrophic rhinitis are very favorably affected. Naturally in cases of this kind the treatment must be prolonged. The author, however, says that its great field is in the treatment of empyema of the sinuses, particularly the maxillary sinus. He reports most brilliant results, and urges those who are in charge of such cases to give it a trial. He uses for this purpose a 5 per cent solution, while in the treatment of pharyngeal and nasal affections he has found that a 1 per cent. solution is better. Another use for protargol is in vaso-motor coryza—hay fever. Here he claims to have had astonishing results from painting the swollen nasal structure with a $\frac{1}{2}$ per cent solution. One advantage possessed by the remedy is that used in ordinary strengths it produces no irritation. VITUM.

Treatment of Ozena by Unipolar Interstitial Electrolysis—HERR

BRAAT, Arnheim—*Journ. L., R. et Otol.*, March, 1899.

Fifteen cases had been treated in eighteen months. In three the result was negative. Empyema was found in ten of these cases.

In eleven (11) cases, five were quickly cured by three, seven, five, eight and six sittings respectively. Four of the cases were seen four months later, and the cure was permanent. The crust formation was but little, and the fetor was absent. The author believes that the current stimulated the trophic nerves.

The sitting took place at intervals of ten to fourteen days and lasted five to ten minutes. The current strength was 19 to 26 m. a.
LEDERMAN.

Treatment of Diphtheria—H. M. McCLANAHAN—West. Med. Rev.,

Vol. iv, No. 2, February, 1899.

The author advocates the use of mercurials in the beginning. The resistance to swabbing offered by young children usually overbalances all the good that is accomplished. Where competent nurses are not employed, physicians should give personal attention to the use of the spray. In the nasal variety the best local treatment is irrigation with a mild alkaline solution by means of a fountain syringe. The use of antitoxin is advocated. The writer commends the use of nascent oxygen when there is extension of the disease into the bronchial tubes and air vesicles, and relates a case of his own in which the life of a child cyanotic from this condition was saved by the inhalation of twenty gallons of oxygen during the night.
EATON.

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DEVOTED TO DISEASES OF THE

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ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

ON EDEMA OF THE NASAL MUCOUS MEMBRANE AND EDEMATOUS OCCLUSION OF THE NASAL PASSAGES.

BY H. GRADLE, M.D., CHICAGO.

Edema is a subject but little referred to in rhinological literature. It is, however, stated by all authors who have examined nasal polypi histologically that many polypi are edematous. This is shown by the distension of the tissue with an albuminous fluid and is apparent, too, by the enormous shrinkage which such polypi undergo when allowed to dry. The observation of edematous polypi before and after removal shows that edema of the nasal mucous membrane presents different characteristics from edema as we observe it in the skin. Pitting, *i. e.*, the persistence of an indentation made by pressure, is not to be observed. With the probe an elastic resistance can be felt, which can be overcome by further pressure, but on discontinuing the pressure the original contour is re-established. Mechanically, the nasal lining, when edematous, behaves rather like the skin in the condition of inflammatory edema, than when a passive dropsical effusion occurs in the skin without adjoining inflammation. The edematous polypus is tense, glossy and translucent, not very vascular and of a lighter color than when not edematous.

The nasal lining presents under some circumstances the same appearances which in the case of a polypus we interpret as edematous infiltration. I have seen the condition mainly in the mucous membrane of the middle turbinal under conditions of subacute inflammation in the upper recesses of the nose either attended with scant suppuration or sometimes without secretion, but in the neighborhood of small polypi. The lining appeared swollen, could be indented with the probe, but regained at once its contour on withdrawing the probe.

The "soggy" condition was not due to vascular turgescence, as was shown by the very slight retraction of the tissues upon applying cocaine solution. The color was more grayish than normal, and the surface appeared almost glossy and more pellucid than ordinarily.

Under these circumstances, I have noticed two peculiar signs, one objective, the other subjective. On manipulating with the probe the view is sometimes momentarily obscured by the formation of a fog or cloud over the surface. I would attribute this momentary fog to the expulsion of fine streams of fluid from the orifices of the dropsical glands of the mucous membrane in consequence of the irritation by the probe. The subjective symptom is the feeling which the patient has as of a foreign body, as shown by the tendency to keep on blowing the nose when asked to do so in order to remove secretion. Even after the surface has been entirely cleared of adherent mucous there is still the sensation that there is something left that could be blown out.

While edema under the circumstances described, although not uncommon, is merely an incidental morbid condition, perhaps of little importance and easily overlooked, it may assume greater importance when it involves the entire nasal lining and occludes the passage absolutely. This cannot be a frequent occurrence, as I have not seen it described elsewhere. I have met with it three times amongst many thousands of nasal patients. In all these cases it developed after an acute inflammatory attack. Whether this was a simple coryza or an influenza could not be determined. There were no circumscribed lesions present to the influence of which the edema could be attributed. In none of the three was there any suppuration. The nasal passages were narrow in these patients, but they had not previously complained of nasal obstruction. The mucous surfaces were in complete contact throughout, at least the anterior part of the passages. In Case I the posterior ends of the turbinals were seen to be edematous; in Case II this was doubtful; in Case III the symptoms suggested the same condition, but a post-nasal view could not be obtained. Deeper inspection was only possible after the slight vascular retraction produced by tampons wet with cocaine solution. The mucous membrane was pale, grayish-pink, distinctly swollen and soggy over the septum as well as over the turbinals and external wall. The swelling was diffuse, not circumscribed. After the edema had been removed the mucous membrane was found hypertrophied at least over the turbinals (Cases II and III), probably also somewhat throughout its entire extent, but when not well pronounced, hypertrophy of the lining is not readily recognized except on the prominence of the turbinals.

The history of these patients promised that the edema might be of indefinite duration. In Case II it had persisted during the winter and a part of the warmer season. The occlusion caused by it did not seem to vary, but was quite constant. After recovery, however, no relapse came to my knowledge.

The objective appearance of the membrane, as well as the patency of the passage were improved by each dilatation with cocaine tampons. In the course of one and a half to two weeks the edema disappeared permanently. The other factors of the treatment—insertion of pledgets with nitrate of silver solution and with carbolized glycerin, the use of sprays, menthol-vaseline, etc., may have been of some service, but, after all, the various modifications seemed to me of doubtful influence compared with the prompt and lasting effect of mechanical dilatation aided by cocaine.

Case I. B. A., a boy of sixteen years, had—together with almost all his family—a violent catarrh with headache and fever, pronounced influenza by the family physician. The acute symptoms subsided in a few days, but the nasal obstruction continued, so that when he called ten days later (April 3, 1895) there was total and continuous occlusion of both nostrils. There was no discharge from the nose, but some dropping of mucous pus into the pharynx. Septum and lateral walls were in absolute contact. The mucous membrane was pale, grayish and distinctly swollen, both on the septum and over the turbinals. No air could be inspired or expired on either side, even after the application of the speculum. By the use of pledgets of cotton wound on toothpicks, saturated with five per cent cocaine solution and inserted into all accessible spaces of the passages, a very imperfect patency was temporarily obtained on both sides. The septum was then found diffusely thickened on the right side and presented a moderately projecting ridge along the superior border of the vomer on the left side. There was no purulent secretion. Satisfactory examination with the post-nasal mirror showed no gross lesion in the pharynx, but grayish turgescence of the posterior ends of all turbinals, which yielded slightly to cocaine application. The treatment, pursued daily for the first week, and in somewhat longer intervals afterwards, consisted in temporarily restoring patency by dilatation with cocaine tampons, followed by brushing alternately with nitrate of silver (two per cent), carbol-glycerin (ten per cent) and later by a spray of Seiler's solution and menthol-vaseline. Each treatment gave increasing relief, but by varying the details I soon came to the conclusion that the efficient part of the treatment was really the temporary restoration of patency and that the other details were

of doubtful benefit. All edema had disappeared after about two to three weeks of treatment, and the obstruction which still occurred transiently was purely due to vascular turgescence. In the course of one month the right side became practically normal, but the left remained slightly stenotic on account of the previously mentioned outgrowth upon the septum. As I could not suggest any further treatment except an operation upon the septum, which the boy refused, nothing more was done. I learned, however, at intervals of months, that he had no further annoyance.

Case II. Mrs. P., a lady of twenty-seven years, in good health, claimed to have had a severe cold in the nose in the fall of 1894. The discharge ceased, but the obstruction became gradually more continuous and total until she called July 31, 1895. Nasal breathing had now become absolutely impossible. There was no discharge from the nose, but some mucous in the pharynx. The mucous surfaces were in absolute contact throughout the nasal passages. The mucous membrane was pale, grayish, translucent and distinctly swollen, and could be only slightly indented by pressure with the probe. Cocaine pledgets restored transiently a very limited patency. The septum was moderately convex towards the left side and presented a flat, horizontal ridge low down on that side, while on the right the upper edge of the vomer had a sharper, but not very projecting outgrowth in the form of a horizontal spur. The pharynx was normal below and above the palate, and the posterior ends of the turbinals appeared about normal (after the application of cocaine).

Under the same treatment as in Case I, the edema yielded largely in the course of ten days. For various reasons the treatment was not kept up regularly during the next month. As the edema disappeared nasal breathing became possible, but was still interfered with by turgescence alternating between the two sides, the right being the one most affected. Although the septum deformity was most pronounced on the left side, the stenosis on the right was maintained by the hypertrophy of the mucous membrane over the greater length of the inferior turbinal. The septum seemed to me to offer an uncertain mechanical prospect for any operation, and hence I snared off the soft hypertrophy of the right inferior turbinal, when I found that medicinal application had no further effect. (September 9th.) Complete nasal patency was thereby restored, and after an observation of a few more weeks the patient did not return.

Case III. Mrs. F., a somewhat neurotic woman, stated that some years ago she had a polypus (?) removed from the pharynx. Since that time her nose has annoyed her only during pregnancies, when

she had had sneezing fits with more or less obstruction. She has been married three years and had two children, being now again in the third month of pregnancy. The rapid succession of pregnancies and the care of the babies have run her down in strength, although she appeared well nourished. Three weeks ago she contracted an acute "cold," and she has now total occlusion of the left nasal passage, with only temporary and imperfect patency on the right side.

December 8, 1897, I found total contact of the mucous surfaces on the left side, and but a very stenotic passage on the right side. The mucous membrane is pale and edematous. Cocaine pledgets cause enough vascular retraction to open both sides partially, but do not change the edematous appearance. The septum is perfectly straight and level. No polypi can be detected. A few small flakes of pus are found on washing out the nasal passages. The pharynx is pale below, but a post-rhinoscopic examination is impossible. (As her intolerance to the mirror did not permit an examination of the post-nasal space, I explored this subsequently with the finger, but found no perceptible anomaly.)

Treatment with dilating cocaine tampons, sprays, application of nitrate of silver (not well tolerated) and carbolated glycerin relieved the edema in the course of twelve days. She could breathe through but one side at a time, although during the night both sides were often closed. As a continuation of this treatment gave no further relief, I snared the vascular hypertrophy over the right inferior turbinal from its front and to about the middle one week later. There was remarkably little hemorrhage during and after the snaring. A week later I performed the same operation on the left side. Nasal patency was thereby well restored, but still some one-sided alternating turgescence continued to interfere with her breathing during the night. This was evidently due to turgescence over the rear ends of the turbinals. I did not consider it advisable to operate any more, and especially in the deeper parts of the nose, on account of her pregnancy. Moreover, I had all reason to expect from her previous experience, as well as from other observations, that the nasal turgescence would subside after delivery. She called occasionally until nearly the end of the term, considerably relieved, but still subject to some sneezing and to moderate one-sided alternating occlusion during the night.

REPORT OF AN INTERESTING CASE OF DYSPNEA IN AN ADULT.*

BY WALTER B. JOHNSON, M.D., PATERSON, N. J.

Mrs. W. R. H., twenty-six years old, a patient of Dr. A. D. Joussett and Dr. Wm. Blundell, of Paterson, N. J., is a rather thin anemic-looking woman: she has been married for about two years: six months ago she became pregnant: gives no history of syphilitic, tubercular or other taint: has never had any previous laryngeal disease. On New Year's day she developed a condition which was diagnosed an attack of "la grippe" and accompanied by almost complete aphonia. During the early stages of the disease from which she was apparently recovering, on the eighth day, there had been no evidence of infection of the lungs.

At this time the patient indiscreetly and in disobedience to the physicians' orders left her bed: severe chills, pain in the chest, dysphagia, increased dyspnea and general constitutional disturbance was the result: she also presented evidence at this time of lobar pneumonia and expectorated a small quantity of characteristic sputa. On the afternoon of January 10th the dyspnea gradually increased until about 7 o'clock in the evening, when the respirations were very rapid and difficult: there was marked cyanosis, and asphyxia seemed to the physicians in attendance to be eminent.

Was then sent for to perform intubation or tracheotomy, but could not be found. My friend, Dr. M. A. Mackintosh, was called: before his arrival, however, a severe paroxysm of coughing resulted in the expectoration of a large quantity of viscid secretion and some blood, after which the dyspnea was considerably relieved, although it persisted to a sufficient extent to keep the patient constantly uncomfortable. January 12th was first enabled to visit the patient and make a laryngoscopic examination. There was marked turgescence of the pharynx, also of the larynx: the patient could not phonate above a whisper, and on coughing emitted a hard stridulous sound: the epiglottis was somewhat thickened and congested, the mucosic membrane of the larynx was swollen and presented a dark bluish-red color, somewhat resembling a piece of beef. Neither the vocal cords or the tracheal membrane could be satisfactorily seen: the general

* Read at the 1895 meeting of the Eastern Section, American Laryngological, Rhinological and Otolological Society, at Washington, D. C., January 28, 1895.

appearance of the laryngeal tissues could be described as rather more turgescient than edematous.

During the examination the patient coughed and expectorated a small hard piece of bloody material, which she stated was similar to others which she had coughed out previously, and after the discharge of which she had always experienced relief. An application of nitrate of silver, two per cent, was made to the larynx.

The patient did fairly well until January 13th: in the evening, when the dyspnea increased, her respirations were very labored, varying between thirty and forty, cyanosis supervened, and she was so sorely distressed that intubation was considered necessary. The adult O'Dwyer tube was introduced without difficulty: the respirations immediately became easy, regular and slower, remaining about twenty-six to the minute: the irritation of the presence of the tube in the larynx induced constant cough, during which she expectorated considerable quantities of blood, bloody mucous and also a hard piece of dark-colored material about the size of a large pea. The coughing was so frequent and expulsive in character that she finally coughed out the tube between five and ten minutes after its introduction. The symptoms were greatly relieved, the patient breathing more comfortably than at any time during the four days last passed: it was not considered advisable or necessary to reintroduce the tube.

There was a slight attack of dyspnea on the same night at about 1 a.m., which lasted an hour and then gradually subsided: this attack occurred during a febrile exacerbation: it was noticeable that during the entire course of the disease, the onset of an accelerated temperature was certain to be followed by an increase in the dyspnea.

The patient complained of dysphagia: the deglutition of spirituous liquors being difficult and causing great discomfort, she was confined to a fluid diet. January 14th she was resting comfortably, although she still respired quite frequently, was nervous and had a rather anxious appearance: during the night and in the morning she had expectorated a number of pieces of the hard membranous material previously described. The larynx was satisfactorily examined: its interior was of a very dark reddish-blue color and there was sufficient swelling to obliterate nearly all of the landmarks above the vocal cords, which were as red as the remainder of the laryngeal membrane: this redness extended below the cords and into the trachea: the excursion of the cords was considerably twisted, on the inspiratory movement, by the swollen condition of the laryngeal tissues.

During the examination some membranous material was observed flapping into the subglottic space apparently partially detached from the tracheal walls; it was shortly afterwards expectorated, and it measured three-quarters of an inch in length, one-quarter of an inch in width and about one-sixteenth of an inch in thickness; it was undoubtedly a piece of deposit from the trachea and with other material of the same character previously expectorated had been an important factor in the production of the dyspnea. Macroscopically it had the appearance of a hard, dried, bloody membrane or scale, such as are frequently formed in ulcerative rhinitis. The material was sent to Dr. Chas. R. Blundell for examination; his report is appended.

January 15th, during the night, she developed a temperature of 104; in the morning it became subnormal and has not been again accelerated up to the present time.

The treatment of the case has been carried on by the physician in attendance. The intubation evidently loosened up the deposit upon the tracheal walls and hastened the process of exfoliation.

During the entire period of the disease after January 12th, in addition to calomel in small doses, aconite, some of the cold tar derivatives and expectorants which had been given previously and as indicated were continued. A steam jet was constantly used: it was obtained from a small but very efficient apparatus called "Simplex alcohol lamp, steamer, vaporizer and perfumer," which was originally constructed for the purpose of steaming the face. The apparatus is inexpensive, convenient and much more effective than any makeshift device which may be used when such an appliance is not at hand. The vaporizer consists of a metal shell in which is placed a reservoir for water, with an alcohol lamp beneath: the reservoir has above it a small receptacle in which may be placed cotton saturated with any desired medicant through which the steam passes to a metal tube from which it is inhaled.

The patient obtained very little relief from any of the resinous, oleaginous or other medicants used in the vaporizer; in fact, she preferred the plain steam inhalations to anything, with the exception of lime water placed in the reservoir, which was not only grateful but most soothing and effective, and had no tendency to produce nausea, which she complained of when the other medicines were used.

The condition was undoubtedly an acute (catarrhal, by some authorities called phlegmonous) laryngitis and trachitis of unusual severity, in which the secretions had become unusually dried and hardened

and were firmly adherent to the tracheal walls and responsible for a very considerable portion of the dyspnea by mechanical reduction in the lumen of the trachea.

The macroscopical appearance of the deposit while in the saline solution was of a distinctly laminated structure as though the exfoliated epithelium had been deposited layer after layer in conjunction with dried bronchial secretions, becoming firmly adherent to the tracheal walls. The intubation was of undoubted value in loosening up the deposit, and although the tube remained in the larynx but a very brief period of time indicated that in such cases, unless the disease had extended too far down the trachea, would, as a means of relieving dyspnea, prove entirely satisfactory. The value of the lime water used in the form of the steam jet instead of the customary cold spray was certainly demonstrated.

The case was to me extremely interesting, in consequence of the death in a distant town of a friend of about the same age, who was also six months pregnant, and in this case the symptoms as related to me indicated the cause of death to have been a similar condition.

There was no indication that the pregnancy was a factor, although it is worthy of note that in the two cases mentioned here both were pregnant and at about the same period of gestation.

An unusual number of cases of acute laryngitis of the same type, but of a milder form, but accompanied by more or less dyspnea, have occurred in my immediate neighborhood during the present season, affecting both adults and children.

I have been unable to find in any of the authorities consulted a description of the thick, dry, scaly secretion which accumulated in this case, nor have I seen any report of or observed any case of acute laryngitis in which the secretions assumed an appearance so closely approximating a membranous character.

The history of the course of the disease herewith presented was kindly furnished by A. D. Joussett, M.D., the attending physician:

Mrs. H., twenty-six years old, six months pregnant, primipara. Highly nervous temperament. Called on January 3, 1899. Was taken suddenly January 1st. Chills, increased temperature, dry, stridulant cough, flushed face, great oppression, cannot talk above a whisper, temperature 103. General treatment for symptoms, diagnosed "la grippe." Under treatment, temperature ranged from 99 to 102. Answered very well to treatment. January 8th, found her dressed and reclining on sofa; had forbidden to move out of bed; examined her and found pulse 90, temperature normal, felt well, no cough, bowels free, skin moist, tongue normal and good appetite. Left after recommending rest and careful nursing; about three hours after I was sent for; found patient with temperature of 104½, pains under right

nipple, respiration 48, pulse 140, bounding. Repeated, prolonged chills, partial cyanosis, inspiration very difficult and spasmodic, complete aphonia, no expectoration, laryngeal spasm, dullness well marked over the lower and middle lobe of the right lung, could not make out any rale on inspiration; on expiration I found a subcrepitant rale, not constant nor pronounced. Saw patient again at 12 p. m., more cyanosed, with a little frothy sputa of the prune juice quality, cough and expectoration very painful and difficult. Prior to the chill and during the grippe period pneumonic sputa never showed itself; next morning respiration fell to 26; temperature 101; somewhat better breathing; more expansion of chest walls; no rales to be found with either act; same dullness.

Dr. Wm. Blundell, the family physician, called in consultation. January 9th, endorsed treatment and diagnosis; patient answered well to treatment, temperature ranging from 101 to 104. At every increase of temperature the laryngeal spasm became more severe. On January 10th Dr. Blundell saw patient, at my suggestion, during my absence, and found her in such distress that he advised seeing Dr. W. B. Johnson, with a possible intubation in view. At 9 p. m. same night I met Dr. Mackintosh, who was kind enough to answer a hurried call. Dr. Johnson being out of town: we came prepared for intubation, but during the last few hours the symptoms were so much ameliorated that we thought it unnecessary for the night. The patient had coughed and expectorated profusely and had perspired very freely, temperature 101, pulse 120, good quality, respiration 24. The family were much alarmed at the bloody sputa; the nurse showed handkerchief with four or five bloody spots upon it. We examined the substance. Dr. Mackintosh calmed the family's anxiety, thinking that now her breathing would be relieved. Next morning, January 11th, Dr. Johnson was called in; examination of throat, local application. January 12th the same symptoms reappeared and towards evening became severe enough to arouse fear for patient's life, unless relief could be procured. Intubated, tube thrown out; after about five minutes there was a profuse expectoration of blood, bloody mucous and membrane like scales; much relief; no necessity appeared for reintroduction of the tube; the patient breathed quietly. January 13th, no change, high temperature, pain in throat. January 14th, temperature below normal, three thermometers 97, pulse 120, feeble, not intermittent; stimulant, milk, etc.; steam gave considerable relief; respiration 26, deep chested; same dullness, middle lobe somewhat less, no pain, complete aphonia. From then on nothing remarkable occurred outside of temperature, remaining below normal for three days in succession and returning to normal without any apparent cause. As to the laryngeal trouble

I will leave the description, etc., to Dr. Johnson. During the entire illness the examination of the urine showed nothing abnormal. At the present writing, January 24th, the patient is doing admirably well, the only remaining trouble being the aphonia.

The macroscopical and microscopical examination was made by C. R. Blundell, M.D., Paterson, N. J., who presents the following report:

The accompanying report is based upon a microscopic examination of two specimens submitted to me.

No. I, which I received January 12th, was examined, but owing to its dried condition and the large amount of blood clot the examination was unsatisfactory.

No. II, sent to me January 14th, was well enough preserved to enable me to make several examinations.

Macroscopically, the specimen presented the appearance of a tenacious gray mass, not unlike the scabs of mucous found in naso-pharyngeal ulcerations. It was pigmented in portions with blood, and upon teasing out seemed to be composed of several layers of membranous exudate. From the history of the case I assumed that this mass had lined the trachea at a point not far removed from the larynx, and that the outer and most tenacious layer of the specimen was that which had been adherent to the endo-tracheal surface.

I, therefore, examined this layer, which could be readily separated from the rest of the specimen, hoping that something might be found relative to the cause of the trouble.

The mounts showed nothing, however, of diagnostic value. The so-called membrane was nothing more than a mucous deposit (which as the first deposit upon the tracheal wall) had become dried by the respiration of the patient.

Examination was made for Klebs-Loeffler, but without success. The several other layers which had deposited were likewise negative. The last deposits, which were distinctively of a mucous character, contained only bronchial discharges, broken-down epithelium and clusters of pneumococci. There was absolutely no evidence of diphtheritic or tubercular infection in this mucous, although repeated tests were made for the same.

I found it impossible to preserve the specimen, as you suggested, owing to shrinkage.

The slides, which I found it best to work with, were those of freshly teased portions. Two slides which I used and later mounted in Canada balsam will be permanent, I believe. The others will probably not be as clear when moistened again.

I thank you for the opportunity afforded to study this case, as its history certainly justified the thought of some unique structural change.

170 Broadway.

HEMORRHAGE FOLLOWING ADENOID OPERATIONS.*

BY W. A. MARTIN, M.D., SAN FRANCISCO.

The following three cases are reported mostly for the benefit of statisticians. All of us who remove pharyngeal adenoids have similar experiences. I had been operating on these growths seven years before I came to a complete realization of what unpleasant consequences could ensue, and I was beginning to think that my methods were more careful and safer than some other operators, who were not so fortunate as regards hemorrhage.

Case I. Master Robert F—, aet. sixteen; diagnosis, Pharyngeal Adenoids. He had been under treatment for several months by a specialist, who had been cauterizing the turbinates; I mention this as it might possibly have been a modifying factor in the after-result. I removed the growth with the Gottstein knife, under cocaine anesthesia; there was free bleeding for a few moments, when it ceased. I had him recline on a lounge in my office while I went to lunch; when I returned he seemed in good condition, so I told him that he could go home; on arising from the lounge the blood gushed in a stream from his nostrils and mouth. This occurred an hour and a half after the operation; I made him lie on his back and it stopped almost immediately; after a quarter of an hour I took him to the dark room in order to examine him with the mirror; after a few moments the bleeding started in afresh. I syringed the nostrils with warm water, which had no effect unless to increase the bleeding. I had everything in readiness for plugging, but before I could summon an assistant from the adjoining room he had fainted and we had considerable trouble passing a plug into the posterior nares, as the blood was strangling him and being coughed out in all directions. I should estimate that he lost about a pint of blood before the plug controlled the hemorrhage; I left the plug in place for thirty-six hours; there was no recurrence when I removed it and the recovery was uneventful.

Case II. Eddie F—, aet. seven. I removed the faucial tonsils from this boy a year ago in March without any unusual hemorrhage. I knew at that time he had adenoids; but I do not make a practice of removing all these growths at the same sitting. On Tuesday, October 4, 1898, I removed the growth from the pharynx; there was no

*Read before the Western Section American Laryngological, Rhinological and Otological Society, San Francisco, Cal., March 31, 1899.

little bleeding that I remarked to the aunt, who was with him, that it was rarely we were so fortunate in our operations. On Wednesday afternoon, October 6th, the aunt came to my office with the word that the child was bleeding; I sent an assistant with her and he reported that there was no cause for alarm; Friday night, after the child was in bed some time, there was another small hemorrhage which caused the family no alarm. Saturday morning, October 8th, the boy was brought to my office; when I attempted to examine the nostrils the blood commenced to flow, dropping about as fast as the tick of a watch for about five minutes; I was in readiness to plug, but it ceased spontaneously, so I concluded to accept the risk. I kept him in the office for an hour and then sent him home with instructions that I was to be telephoned if there was any recurrence. Another hemorrhage occurred a little after five in the afternoon, at the time I was going from my office to my home, so it was nearly an hour before I saw the child; by this time he was almost exsanguinated; large clots protruded from each nostril; this bleeding amounted to about three-fourths of a pint. I plugged both posteriorly and anteriorly, leaving the plugs in position for twenty-four hours. There was no recurrence after their removal. I kept the child in bed for four days. He was several weeks in recovering his normal color, but now he is healthier than ever.

Case III. May Q—, aet. six years. I operated this child under chloroform anesthesia some three months before and either did not get all the growth or there was a recurrence. There was relief for two months, but since then the same symptoms had returned. The parents objected to the use of chloroform again, so I operated without; there was some difficulty on account of inexperienced assistants who did not hold the child properly. I tore the growth loose with the first sweep of the knife, but for some reason was unable to re-engage it again, so had to finish with the forceps. The operation was performed on Monday, October 17th. On Sunday afternoon, October 23d, there was a slight hemorrhage from the nose about which the family physician was consulted, but which was not regarded as of any consequence. At midnight of Tuesday, October 25th, nearly nine days after the operation, I was summoned by telephone; when I arrived at the house I found the child had vomited a quantity of blood, a large amount of which could not have been in the stomach long, as it formed a coagulum in the bottom of the basin; in all, I should say half a pint of blood lay in the bottom of the basin, besides some had escaped. The child was ashy pale, but strong, and protested vehemently against my presence, so I had the parents in-

duce her to expectorate in the basin to see that she was not still bleeding. She was kept in bed for three days; the anemic condition lasted for six weeks more.

Southeast corner of Geary and Stockton.

Post-Nasal Adenoids—ORRIN L. SMITH, Chicago—*The Clinique*, April 15, 1899.

The author believes that in all cases of ordinary croup there exists some hyperplasia of the pharyngeal tonsil, and hence the surgical removal of such tissue should be urged and practiced.

STEIN.

On the Technique of Operations on Adenoid Vegetations and on Peritonsillar Abscess—ERNST BARTH—*Deutsche Med. Wochenschr.*, April 6, 1899.

This little paper contains some practical hints as to operating on adenoids and tonsils. The first is that in case pieces of adenoid tissue are left hanging by strips of mucous membrane, a very convenient instrument for cutting them loose is Hartman's conchotome. In using it, however, one must be careful that a part of the uvula is not included in its "bite."

Everyone experienced in the matter knows how difficult it is to locate the pus in a peritonsillar abscess. Barth recommends the use of a hypodermic syringe as an aspirator, and after the abscess cavity is located we can then make our free incision. If, however, the pus lies deeply and we hesitate to penetrate so far with the naked blade, he suggests that, as the tissues are already softened by inflammation, we can bore in with a pair of closed artery forceps, and after we have entered the pus cavity open out the instrument so that a free exit is afforded.

VITTUM.

Rhino-pharyngitis in Children—E. AUDAT—*Revue Hebdomadaire de Laryngologie, etc.*, Jan. 28, 1899.

Rhinopharyngitis is an affection frequently present in children of a lymphatic and scrofulous temperament. Outside of the ordinary causes, eruptive fevers, scarlatina and measles tend to develop this affection. Adenoid vegetations are more frequently the effect than the cause. It may exist in nursing children as well as in children of thirteen and fourteen years. This affection is serious on account of its tenacity and the complications which in spite of every care may develop, such as otitis, laryngitis, bronchitis and digestive complications. The treatment consists of syringing and spraying with mentholated oil in addition to general reconstructive treatment.

SCHIEFFEL.

A CASE OF TEMPORAL ABSCESS DRAINED THROUGH THE ATTIC AFTER OSSICLECTOMY AND CURETTEMENT.*

BY HAMILTON STILLSON, M.D., SEATTLE, WASH.

The writer is quite prepared to have the diagnosis questioned when he claims to have made exit for the pus through the tegmen and attic in a case of cerebral abscess of otitic origin, yet such is his claim.

Moreover, the patient recovered, which, according to Politzer, she should not have done. This author's position surely is no longer tenable, for the case reported below is but in line with the numerous cases reported in recent literature, notably that of Adolph Bronner, in the *Litzke*, April 2, 1899. Bronner's case was complicated with sinus thrombosis, but simple drainage through the tegmen and attic was relied upon for the cure—the sinus thrombosis being left to take care of itself. And Bronner's case recovered.

So that the writer will not be deterred by Politzer's pointed remark, namely: The description of the cases quoted in the literature of the subject, as recoveries, renders the diagnosis of otitic brain abscess doubtful. (*Diseases of the Ear*, p. 536).

The present case is as follows:

On September 22, 1898, the writer was called to Sedro-Wooley, Washington, by Dr. Harbaugh to examine the left ear of Mrs. R. English, aged about thirty years.

History. Three months prior the patient had had an attack of acute mastoiditis, was brought to Seattle and placed in a hospital under the care of an aurist, who in a week or so subdued somewhat the acute symptoms, but who was unable to retain the patient long enough to render her beyond danger of relapse. The patient upon her return to Sedro-Wooley steadily declined despite the most painstaking care of her attending physician.

Status Præsens. Anemia, anorexia, insomnia, lassitude, hebetude, occasional attacks of "shivering," convulsions?, giddiness, dizziness, tinnitus, paresis of extremities and muscles of face, occasional slight delirium, occasional incontinence of the urine, lately rigors, fluctuations of temperature from normal to 104, fluctuations in rate of pulse, no retinal hemorrhages, optic discs

*Read by title at the fourth annual meeting of the Western Ophthalmologic and Otolaryngologic Association, New Orleans, February 1, 1899.

hyperemic ("obstructive neuritis"), but edges of discs neither abnormally distinct nor abnormally obscure, no pulsations in retinal vessels, iris sluggish but responsive, pupils rather dilated, cervical glands on left side slightly enlarged but not particularly red nor tender, external ear not particularly affected, upper posterior portion of inner end of external auditory canal not especially prominent, membrana tympani distended and red, membrana flaccida especially so, a perforation in membrana tympani in upper posterior quadrant, small perforation through which fetid pus exuded, membrana flaccida intensely congested, only the head and handle of the malleus discernable through the membrane, very slight redness and tenderness of the mastoid, a decided spot of redness and tenderness just above external meatus, severe pain in left side of head, especially over temporal and parietal bones above ear, increased by pressure, percussion of left side of head especially painful.

Diagnosis. Exclude extended meningitis by absence of choked disc and venous congestion. Exclude thrombosis by absence of swelling of lids, protrusion and immobility of eye, dilated and rigid pupil, blindness, insensibility of conjunctiva, retinal hemorrhage, stasis of retinal veins. The only symptom indicating thrombosis was the sudden rise and fall of temperature. Include cerebral abscess in region of temporal lobe (probably extra-dural) with incipient septicemia.

Indications. Now the cranial cavity had evidently not been invaded by way of the antrum mastoideum or the petroso-mastoidean canal, otherwise the mastoid would have shown greater involvement. The spot of redness and tenderness above the ear would indicate invasion by way of the tegmen. And since the patient's lowered powers of resistance would scarcely permit her to rally from the shock and danger of meningitis following trephining of the temporal, and since as a rule so little reaction follows ossiclectomy, tentative ossiclectomy with opening of the tegmen was resolved upon.

Operation. After cleansing the external meatus the entire membrana tympani, malleus and incus were removed. The short process of the malleus together with parts of the incus were found necrosed. The stapes were permitted to remain. Exploring the vault with a probe the tegmen was found much necrosed, there being apparently a narrow ragged opening into which the point of the probe could be forced. This condition recalled Politzer's fatal case pictured on page 527 of his "Diseases of the Ear." Removal

of the tegmen was decided upon. Introducing a sharp curette, whose handle was bent, careful curettement was made. Soon, to the writer's gratification, a gush of pus occurred so promising and free that the operator stopped content. The patient was then left in the care of Dr. Harbaugh and Dr. Mattice, at whose private hospital the operation was performed. So well was the drainage maintained by them that the patient rapidly recovered, not, however, before metastatic abscesses occurred on the lower extremities. Fortunately none developed in the more vital organs and the septicemia responded to appropriate treatment.

Result. Dr. Harbaugh reports that the patient is now about her household duties free from septicemia and in reasonably good health, no discharge from the ear, and can hear with the left ear ordinary conversation at eight or ten feet."

Remarks Upon an Ear and Throat Infection with Subsequent Involvement of the Neck—ERNEST H. COLE—*Med. Rev.*, Vol. xxxix, No. 21, May 27, 1899.

A girl of fourteen, when first seen, had left suppurative otitis media. Under treatment, on the fourth day, the discharge had apparently ceased. On the fifth day there was marked sore throat and marked erosion of the tonsils seen, and on the left region [of what?—*Ed.*] a slight swelling, very tender to palpation. Temperature, 100°. Restricted movement of the jaws. The tumor was incised and a small amount of pus and blood escaped. On the next day the patient complained of pain in the muscles of the neck, the head being drawn toward the left shoulder. There had been no heat, redness or swelling in or about the left mastoid. On the seventh day a lance incision was made at the base of the neck, and two drams of thick greenish-yellow pus evacuated. Irrigated for several days, and all symptoms improved. The author asks: "Could this be autoinfection from the orifice of the Eustachian tube? Could the abscess in the base of the neck have been caused by the abscess in fauces, or was it caused by a low grade of mastoid trouble? The latter is my belief." [Possibly a self-limited case of "Bezold's Mastoiditis."—*Ed.*] EATON.

Mastoiditis—C. GURNEE FELLOWS, Chicago—*The Clinique*, April 15, 1899.

An early and radical operation was done in all four cases presented. In one case, where the drum membrane and ossicles were not disturbed, there was an improvement in hearing of twenty-four inches for the watch. STEIN.

MULTIPLE RUPTURE OF THE MEMBRANA TYMPANI.*

BY KATE OVERACKER, M.D., SAN FRANCISCO, CAL.

The case I report was first seen by me one evening about two years ago. As the patient, excited and anxious, walked into my office with a staggering gait, he had the appearance of being intoxicated. The history he gave was that a half hour before, while sitting at a table in a cafe, a julep straw had been pushed into his left ear as he turned his head suddenly. His first impression was that of a loud crashing sound followed by a dizziness so severe as to compel him to remain in his seat for ten minutes. This sensation of giddiness then diminished, but he still could not walk without staggering decidedly. He was a man of about thirty-six, and had always been healthy and temperate as to drinking.

An examination of the ear showed a slight laceration along the posterior wall of the canal: there was very little bleeding. There were three distinct ruptures in the membrana tympani from above downward extending almost the entire length. The malleus was exposed and pushed downward. There was total loss of hearing and no tinnitus. The ear was washed out with carbolic acid of one per cent and a little boric acid dusted in. The next morning the giddiness was less, but continued for the following three days. No pain present and the appearance of the drum the same. On the third day, after using pyrozone in the ear, the torn part of the membrana was washed out leaving a circular opening occupying two-thirds of the drum. Quickly a new membrane formed, the perforation being closed by the tenth day. During the first week the ear was inflated by Politzer's method two or three times daily, the hearing increasing, but as soon as the opening closed the watch was heard on contact only. After this, for two months, inflation was continued once daily. At the end of that time the membrane was opaque, white, no lustre, but position fairly good.

About eight months from this time, the man suddenly began vomiting and had slight attacks of dizziness. Two weeks before he had had a severe cold, but no other illness during the eight months. His physician at first treated him for a "bilious attack," but after four or five days the dizzy spells, from eight to twenty a day, continuing, I

*Read before the Western Section, American Laryngological, Rhinological and Otological Society, San Francisco, Cal., March 31, 1898.

was asked to examine his eyes, his physician suspecting some brain lesion. The giddiness came on without warning and lasted but a few seconds, there being no tinnitus or change in the hearing. The eyes were normal. On examining the injured ear, I found the drum very concave and appearance much changed. Deciding that the cause of his trouble was in the ear, inflation four or five times the first day was tried with a little benefit. The membrane was then freely incised and found to be tough and thick. Inflation was continued. The attacks at once stopped; but after a week the opening was closed and slight attacks returned. I then opened the drum again, and on a more thorough examination found strong cicatricial adhesions between the drum and the inner wall of the tympanic cavity.

These were freely incised and the inflation continued. Though the drum healed quickly, there has been no return of the unpleasant symptoms.

The interesting points of the case to me are, the extent of the injury, the rapid formation of a new membrana tympani under aseptic conditions, and that, after so long a time, trouble should arise from the ear.

606 Sutter Street.

Hemorrhage from the Ear WALTER H. BROWN—*Lancet*, June 4, 1898.

Case in which the common carotid was tied for profuse hemorrhage from the ear. There is no description of the condition of the ear.

STCLAIR THOMSON.

Extraordinary Case of Horse-bite; the External Ear Completely

Bitten off and Successfully Replaced—WILLIAM J. BROWN—*Lancet*, June 4, 1898.

The case is described by the title. The bitten-off ear was picked up in a stable yard. No appliances were at hand: so it was simply cleansed with warm water and sewn on with ordinary sewing needles and thread. There was hardly any disfigurement.

STCLAIR THOMSON.

SOCIETY PROCEEDINGS.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-first Annual Congress. Held at Chicago. May 22, 23, 24, 1899.

PRESIDENT, DR. WILLIAM E. CASSELBERRY, OF CHICAGO.

[Reprint from MEDICAL RECORD, June 10, 1899.]

First Day—Monday, May 22d—Morning Session.

President's Address.

“This association was organized in response to an invitation sent out by the late Dr. Frank H. Davis, of Chicago, who may thus be said to have been its real founder. It is therefore eminently fitting that we should meet in the city where the founder lived and worked. The time-honored custom of an address from the President affords opportunities for dwelling upon various matters which might not be appropriate for any set paper or discussion. I therefore beg leave to call your attention to some of the topics which may thus properly be considered. All are doubtless conscious of the changes wrought in laryngological practice by the advance of nasal pathology and by the inclusion of the ear in the sphere of work. The laryngologist formerly treated diseases of the throat and chest. Now he tends to be a surgeon with a routine of practice limited to local measures applied to the upper respiratory area. We should strenuously deprecate the tendency to deal with the nose and throat exclusively in a mechanical way and as if they were parts without organic relation to the rest of the body. Such a view engenders narrowness of thought, and the practitioner thereby loses much of that fundamental knowledge of pathology and applied therapeutics so demanded by the patient's best welfare. The proper care and treatment of nasal troubles are by no means effected simply by boring a hole through the nares and thereby making them patent, though the ill-advised procedures of many posing as laryngologists would seem to indicate that such was the case. It is freely conceded that the ear and nose stand in intimate relations. The laryngologist must treat aural affections, and he should cultivate an exhaustive knowledge of this branch of medical science. Care should be taken not to neglect, in enthusiasm for the ear, the original laryngological study. Such a tendency to render undue homage to the ear is shown in the use of such words

as otolaryngology, otorhinolaryngology, etc. In addition to this, there are many in the smaller towns who combine eye work with that of the nose and throat, and hence there are many posing as laryngologists whose education and restricted routine of practice put them out of touch with many pertinent phases of the subject. The laryngologist of to-day should constantly endeavor to make the real diagnosis in the earliest stage of lung tuberculosis. Many of these patients are liable to come first to him complaining of cough, irritable throat, husky voice, and inclination to nasal inflammations. While they may complain only of throat trouble, they should be exhaustively examined. The conventional injection, spray or cauterization does not suffice. The laryngologist need not embrace in his practice the entire broad field of chest diseases, but he should be familiar with every art of diagnosis and every therapeutic resource in order to do his patient justice. For the former he should keep himself proficient in the making of physical examinations of the chest, should carefully note the height and weight of his patients, their chest conformation and perimeter, should ascertain the vital capacity, be able to stain for bacilli, and be versed in the use and interpretation of the tuberculin test. Incipient infiltration of the larynx, disclosed only by the mirror, may afford the earliest clew to the existence of pulmonary trouble. The presence of polypi in the nose with degeneration of the middle turbinal and unassociation of sinus disease will enable us to exclude tuberculosis in favor of bronchial asthma or chronic broncho-pneumonia. Inspection of the throat will also frequently reveal the cause of cough or hemorrhage, which otherwise might be regarded as evidence of pulmonary mischief. Attention must also be given to the heart, aorta and mediastinum. Aneurismal pressure will often show itself by the paralysis of a vocal cord. In old persons an elongated uvula will often appear to be the cause of an irritable cough, but a more careful examination may reveal an enlarged heart with valvular lesions. Hence, while the uvula may be an exciting factor in the production of the cough, the underlying cause must be attributed to the irritability of the respiratory tract brought about by failing cardiac compensation.

“The laryngologist should also be a good systematic therapist and cultivate the habit of careful prescribing. He should study the conditions of natural immunity and susceptibility so that he may be able to designate the proper mode of life and place of abode best adapted for each individual case, familiarizing himself with sanitation, hydrotherapy, climatology and sanitary methods. Reports from the Rocky Mountain region show that twenty per cent of cases

of laryngeal tuberculosis can be cured in that locality, and that an additional twenty per cent can live along greatly improved for an indefinite period.

“In connection with bronchial asthma, present-day studies in nasal pathology establish the fact that vaso-motor changes are at the bottom of many of these cases which are accompanied with polypoid changes in the ethmoid region. The laryngologist should be ready to assume complete charge of all such cases, treating them along broad therapeutic lines.

“All laryngologists are familiar with many throat conditions which appear as salient features of underlying systemic states. Edema of the larynx is often secondary to nephritis; laryngeal ictus is often the forerunner of tabes. Hence the true clinician in the special field of laryngology should be first of all a good physician and after that a specialist. Nor need a man with this breadth of view be any less skilled in the operative technics of tonsillotomy, in the rectification of deflected septa nasi, in the surgery of sinusitis and in mastoid affections. He can appreciate the disadvantage of nasal obstruction just as well as another who perceives that alone.

“Gentlemen, we have met to aid each other in the search of more truth. Let us profit by each other's experience, search along more liberal lines, and endeavor to realize that conception of power phrased by the Sage of Concord: ‘A cultivated man, wise to know and bold to perceive, is the end toward which nature works.’”

Is the So-Called American Voice Due to Catarrhal or Other Pathological Conditions of the Upper Air Passages?

This paper was read by Dr. John W. Farlow, of Boston. He said that the so-called American voice was characterized by a peculiar nasal twang, which was quite distinct from the vocal modifications arising from faulty conditions in the fauces and larynx which are not here considered. Such latter were the thick voice of enlarged tonsils and the voice of low carrying power due to various laryngeal affections. Any interference with the free passage of air through the nares impaired vocal resonance, but did not produce the peculiar American nasal voice. Anterior deviations and spurs of the nasal septum occasioned abnormal air vibration in the nose, as also did a narrowing of the organ at the tip, especially when it was bent downward. Anterior turbinal enlargements and polyps acted in a similar manner, and in the same category might be included chronic catarrhal inflammation of the nasal mucosa without hypertrophy. From all these causes there resulted anesthesia and paresis of the soft palate;

hence some tones which should be formed in the mouth were produced in the naso-pharynx at a higher level. This was probably the reason why the nasal twang persisted after operations had been done for adenoids, for it took some time for the palate to grow out of its parietic condition. The twang did not seem to be caused by merely atrophic conditions. For purposes of study we might group our patients into three classes, according to age—below twelve, between twelve and thirty and over thirty years. In the first class nasal voice was very common, but the foregoing lesions, which might be regarded as its cause, were not especially frequent at this stage of life. In the second class the lesions were more common, but this particular variety of voice was less so. In the third and older class nasal voice was comparatively infrequent. From this line of reasoning it followed that the nose alone did not determine the classification into nasal and non-nasal voices. Voice-training would often improve its quality without any special intervention, medical or surgical. In short, pathological conditions seemed to have far more influence on the range and power of endurance of the singing voice than upon its quality in the median register. In children, nasal voice was often only a matter of imitation, cured by placing them with persons who spoke properly. It must be stated also that the possession of an agreeable voice was quite compatible with the existence of abnormal anatomical conditions. All civilized races presented anterior obstructions. The great emigration of all nationalities to this country had introduced into our common speech all sorts of bizarre vocal sounds, and we were very careless as to the best methods of speaking. Yet some of the most pronounced nasal voices were heard in country villages where the population was purely native. The necessity of properly training children's voices could not be too strongly urged. They should be removed as far as possible from vicious influences in this respect. Every autumn our newspapers were flooded with advertisements of singing teachers, each one of whom claimed to possess the correct method, but only one person sang while a hundred talked. People fell into the conversational habits of the community in which they lived, and made no effort to better faulty methods.

Discussion of this paper was opened by Dr. G. Hudson Makuen, of Philadelphia, who deplored the lack of attention given to tone formation as a rule. The medical man knew little about the subject, but the laryngologist especially should be in a position to instruct the singing-teacher. The excessive tension of our American life was partly the cause of the nasal voice, and we must learn to cultivate the teachings of the "gospel of relaxation," for our American push was

fast assuming the proportions of a national calamity. So far as the anatomical factor in this question was concerned, the low-hanging palate during speech was probably the prime element, as it centered the vibrations of sound waves in the naso-pharynx. By practicing before a mirror with the mouth open, the patient could learn to give the proper tone to the levator palati muscles.

Dr. T. Amory De Blois, of Boston, thought that the peculiar quality of voice was largely a racial question. The guttural of the German, the vibratory nasal voice of the French and the high-pitched tones of the Yankee were familiar illustrations, while the English voice among all social ranks was of an agreeable low pitch.

Dr. John O. Roe, of Rochester, called attention to the "resonator" office of the nasal sinuses, the size and shape of which strongly modified the voice. Their influence was not cut off by anterior obstructions, but posterior ones greatly affected it. The structure of a given language affected voice tone. Languages with many consonants, as German and Russian, gave low-pitched voices, while one with many vowels, as French, gave the opposite.

Dr. A. W. De Roaldes, of New Orleans, mentioned American conversational habits, instancing the fact that racial mixtures and the easy mode of living in the south produced lower-toned voices than different conditions in this respect in the North. Negro voices were rarely high-pitched.

Dr. Thomas Hubbard, of Toledo, ascribed to the noise of our American cities much of the prevalent high-pitched speaking. This was necessary in order to make one's self heard. From the noisy environment also the ear became dulled and the appreciation of vocal misuse was blunted.

In closing the discussion, Dr. Farlow expressed the view that the low palate was often due to lack of use, but he could not look upon it as the initial cause of nasal voice. Its causative relation was secondary, not primary. So far as the influence of the sinuses was concerned, he would remind the Association that nasal voice was most common in children in whom the sinuses were scarcely at all developed. Voice was but very little due to language, for English was spoken in many lands, none of which presented the American nasal tone. As to city noises, the most pronounced twang was often heard in the quiet village.

Adeno-Carcinoma of Nose, with Report of Case.

This was a paper by Dr. James E. Newcomb, of New York. The transactions of the Association for two years ago contained the re-

port of two cases of this nature and allusions in all to twenty-three other cases in which the clinical diagnosis had been verified by microscopic observation. The additional case to be reported was that of a woman, aged sixty-one years, who had suffered for nearly six months before coming under observation from daily nose-bleed with obstruction of the left naris. Bleeding had been severe on one or two occasions, but had never required any operative interference. There was some emaciation. Three months before coming under observation she had blown from the nostril what was probably an ordinary polyp. Examination showed enlargement with polypoid degeneration of the left middle turbinate. Around it were several fleshy proliferations which bled easily upon manipulation. Pressure symptoms and glandular enlargements were absent. Masses were removed under cocaine. The pathologist's report was adeno-carcinoma. The patient has thus far refused radical operation. Some six authentic cases of this nature have been reported during the last two years. Cancer of the nose is rare. Gurit was able to find only four cases among 9,554 cases of cancer of all organs. It was claimed that the association of ordinary polyps with carcinoma was only a coincidence. Tissier, who has written at length upon this phase of malignant disease, does not believe that the epitheliomatous degeneration of simple polypi had ever been definitely proven. What we knew about the etiology of nasal polypi would explain their occurrence in a cancerous nasal fossa. On the other hand, Plieque stated that it was pretty frequent after the ablation of numerous benign polypi to find new polypi appearing, this time composed of epitheliomatous tissue. Dr. Newcomb thought the latter statement incorrect, for polypi were very numerous and often removed by very crude means, while the occurrence of cancer here was very rare. Mention was made of a surgical procedure suggested by Dr. Dawbarn. It consisted of the ligation on both sides (a suitable interval occurring between the two operations) of the eight branches of the external carotid artery, and then of the excision of the entire trunk of this vessel in the attempt to starve the growth by shutting off its blood supply.

Dr. G. V. Woolen, of Indianapolis, mentioned the case of a girl of eight years who had in the nostril what appeared to be an ordinary polyp, which came on two years after an injury. Removal was followed by recurrence. The microscopist reported on the original polyp that it was non-malignant, and only mucoid in character. The latter clinical history showed that it was malignant, and it extended over so wide an area as to be inoperable.

Dr. J. L. Goodale, of Boston, spoke of the case of a man aged fifty-one years, from whose nose polyps had been annually removed for some years. The last removal was in May, 1898. Five months later there came on exophthalmos, pain and nasal obstruction, with the left naris full of a soft bleeding mass, which was removed and showed a fibrous stroma with epithelial cell nests. Recurrence took place.

Dr. Thomas Hubbard, of Toledo, said that he had had under his care a farmer who had had antral suppuration for seven years. Later a growth appeared within the antrum and thence extended into the naris. Examination of a portion removed revealed the presence of cancer.

Removal of a Foreign Body from the Bronchial Tube Through a Tracheal Opening.

This paper was by Dr. A. Coolidge, Jr., of Boston. The patient, a young man aged twenty-three years, was tracheotomized in early childhood and had worn a tube ever since. The last one, of hard rubber, from long use gave way, the tube proper becoming detached from the shield and being inhaled. Severe cough with difficult and noisy breathing was present on admission to the hospital twelve hours later. An X-ray examination was negative. He was etherized and placed on his back with head extended and rotated to the right. The original tracheal wound was enlarged downward and to the right. A urethroscope half an inch wide and three inches long was passed down (with stylet in position); the stylet was then withdrawn and the speculum without difficulty pushed down the trachea to within an inch of the bifurcation. A hand-mirror and sunlight afforded suitable illumination, by which means the upper end of the tube was seen in the right bronchus about half an inch below the bifurcation. A pair of alligator forceps passed through the speculum effected its removal without disagreeable after-effects. During the entire operation breathing was carried on through the tube. Cocaine had been applied to the tracheal mucosa, so that there was no inconvenience from secretion, though at first the cough caused some annoyance. Septic pneumonia was the ever-present danger when foreign bodies in the air passages were treated on the expectant plan. Hence it was necessary to have well-defined courses of procedure to follow as occasion required. When the body was so large as to lead one to believe that it was still in a main bronchus, tracheotomy with exploration by straight tubes was the course to follow. If the smaller size of the body had carried it down to a sec-

ondary bronchus, we might still operate if there was a good chance of reaching it after illuminating the primary bronchus. This might be done especially on the right side. A body which was moving to and fro in the windpipe was not so dangerous as the same body impacted in a bronchus. We should therefore sedulously avoid everything calculated to excite respiratory spasm. Consequently cocaine was preferable to ether for tracheotomy. Occasionally it might be possible to pass a straight tube down through the glottis, but care must be taken to avoid pushing a loose body farther down. Here it was wiser to attempt to reach it by tracheotomy from below. The most rigid rules of surgical cleanliness must be followed. We knew that the lower trachea and the bronchi were quite flexible, and this was a favoring circumstance, as it allowed us to bring into a straight line the bronchus under observation.

Dr. H. L. Swain, of New Haven, related the histories of two cases. Statistics showed that foreign bodies were frequently expelled, sometimes months after they had found lodgment. Then ulcerative processes caused their dislodgment. In one of the cases mentioned by him, a shingle nail had remained in the bronchus for several months, when the patient was struck by a train and knocked senseless. Upon coming to, he was seized with a fit of coughing, and the nail was brought up.

Dr. Roe declared that after looking over the statistics of thousands of cases, he had come to the conclusion that the best procedure was to leave the body alone if it was not producing active symptoms, for in the vast majority of cases the body had been expelled later.

Dr. Roaldes believed that operation should not be deferred. In eight cases which had come under his personal observation, operative intervention had been undertaken, and the body was removed in seven. A low tracheotomy should be done and the bronchus titillated so that a reflex cough would be set up, the edges of the tracheal wound being held widely open. He would object to the Association's advising a policy of non-intervention in this class of cases.

Dr. Woolen thought that if there were no immediate symptoms, and if the body was of such a nature that it might as a possibility be easily expelled, it was prudent to wait; but if the reverse conditions obtained, one should operate at once.

Exhibition of a Case of Stammering, with Demonstration of the Methods Employed in Treatment.

This paper was read by Dr. G. Hudson Makuen, of Philadelphia. His patient was a civil engineer, twenty-nine years of age, who had

suffered since childhood without assignable cause. The condition appeared to be the outcome of a congenital neurosis. The main feature of this defect was a spasmodic action of the palatal muscles whenever attempts at speech were made. There resulted a sudden closure of what the writer would call the posterior palato-lingual chink. The frequency and duration of the attacks varied. They came on at most unexpected times, giving the speech a jerky character and at times stopping it completely. Attempts at reading increased the difficulty, and the patient seemed at times to be unable to think connectedly. We must study out the site of the neurosis in each individual case, for no two were exactly alike. A younger brother of this particular patient began to stammer, but was cured by giving attention to his malady. The occurrence of the speech difficulty in two members of the same family, and at such an early age, rendered the theory of a congenital neurosis in this particular case extremely probable. In the patient shown, the chief neurosis was in the nerves going to the respiratory and not those going to the pharyngeal muscles, the spasm of the latter being secondary and due to a reflex overflow of nervous energy from the respiratory and vocal mechanisms. The vocal element of speech was lacking in promptitude. It was as if the bow-hand of one playing the violin should cease to operate in unison with the string-fingers, and as if the latter should try by increased energy of action to make up for the defective bowing. This forced and unnatural fingering had its counterpart in articulatory and other spasms of the stammerer. Normal speech was characterized by automatic action of the various muscles, and when any portion of the complex mechanism failed to functionate, this automatic sequence was broken and stammering resulted from a failure to make the various sets of muscles co-ordinate. In this particular case, inasmuch as the primary fault was in the respiratory mechanism, resort was had to direct nervimuscule training. In this the faulty muscles were singled out and by voluntary exercises made to act properly. This plan was superior to the indirect method which led the patient unconsciously by means of correct speech to use the muscles properly. The advantage of the former was that it developed the nerves as well as the muscles, and established a volitional control over the faulty mechanism. The essential parts of the respiratory mechanism were the thorax, the muscles regulating its size, and the nerves supplying them. The muscles were divided into two sets according as they elevated or depressed the ribs. The levators were inspiratory and the depressors expiratory. We could train our patients to develop the action of any

of these muscles, even the diaphragm. Then we could combine the muscular mechanism with the vocal.

At the close of the morning session the following specimens and instruments were exhibited: By Dr. Farlow, large adenoids removed from a woman fifty years old; also, an intra-nasal splint. By Dr. Swain, for Dr. Thomas R. French, of Brooklyn, post-nasal forceps, mouth-gag, and a modification of Bosworth's nasal speculum. By Dr. Coolidge, a nasal splint for external injuries, and a laryngeal applicator devised by Dr. J. Payson Clark, of Boston. By Dr. Casselberry, a nasal snare.

Afternoon Session.

Septic Phlebitis with Thrombus as a Complication of Peritonsillar Abscess: Report of Two Cases.

This paper was by Dr. M. R. Ward, of Pittsburg. Dr. Ward briefly discussed the pathology of this condition, saying that the lungs were most frequently infected, an infarction resulting with subsequent septic pneumonia and even gangrene. Less frequently the liver suffered, along with the kidney, spleen, and brain. He had been unable to find recorded more than three cases exactly identical with his own, and gave a summary of the clinical features of each. His own first case was that of a woman thirty years old, who for three weeks had pain and soreness in the left tonsil. These subsided, and then in three days a tumor appeared in the right side of the neck with right peritonsillitis, though no fluctuation could be made out. The post-cervical glands were swollen, as were also the muscles of the neck, and the temperature rose to 102 F. Soon pain developed in the lower portion of the right lung, with speedy chill and a pyemic course. Pus was present under the superficial fascia of the neck. No connection between this focus of inflammation and the abscess about the tonsil could be made out. The pneumonia extended, and the patient died on the ninth day. A thrombus was found in the internal jugular extending up to the tonsillar plexus. The second case was that of a German, aged forty-two years, who died four hours after admission to the hospital. It was found that he had had a left peritonsillar abscess which had been incised, and that two days later his symptoms returned with chill and a commencing pyemia. He died on the sixth day. The autopsy findings were the same as in the case preceding, with, in addition, the presence in the kidneys of numerous small abscesses.

Report of Cases of Chronic Empyema of the Antrum of Highmore Operated Upon by the Caldwell-Luc Method.

This was a paper by Dr. A. W. de Roaldes, of New Orleans. Five cases were reported. In all of them, a radical and speedy cure was obtained. The writer expressed surprise that this plan of operation originally devised in this country had not been more generally followed. It was believed to be superior to the older plans. The various steps of the operation could be summarized as follows: 1. A buccal incision was made parallel with and near enough to the upper gingivo-labial fold in order to allow of the subsequent easy union of the muco-periosteal flaps. 2. The anterior wall of the antrum was opened in the canine fossa, the opening being ovoid in shape. Its extremities gave easy access to the tuberosity on one side and to the nasal wall on the other. 3. The cavity was thoroughly curetted and all diseased tissue removed. 4. A portion of the anterior extremity of the inferior turbinate was removed. 5. A large artificial opening was made in the nasal wall of the antrum as close as possible to the angle formed by the floor and anterior wall. 6. The cavity was finally inspected, cleansed, dried and lightly dusted with iodoform, followed by suture of the muco-periosteal flaps. Iodoform gauze was gently packed into the antrum and also into the nasal fossa, changed on the third to fifth day, and afterward on alternate days until about the twelfth day. The patient was then allowed to irrigate the cavity with a syringe and cannula, using boric-acid solution. In all the cases forming the basis of the paper radical cure resulted in from four to six weeks. In one of them a little secretion could sometimes be found at the entrance of the sinus, but this was ascribed to an old ethmoidal trouble, the pus leaking into the sinus through an opening in its nasal wall from old necrosis. Dr. Roaldes dwelt especially upon the importance of locating any other possible focus of suppuration, as the latter might prove a serious complication or materially retard healing.

In discussing this paper, Dr. Roe remarked that one should bear in mind the level of the antrum floor with reference to that of the nares, and also the fact that pockets and septa might exist in the antrum.

Dr. E. Shurly did not think that operation was always necessary. Dentists and general surgeons were more likely to see these cases frequently than was the laryngologist. The acute form of the disease, such as followed upon influenza, often got well of its own accord, while in the chronic cases curetting was often necessary. He

thought that the opening into the nasal cavity would offer far greater likelihood of infection than one into the mouth.

Dr. Makuen observed that the law of gravitation did not seem to hold good in drainage of the antrum. There seemed to be a sort of capillary drainage going on which was increased by nasal respiration.

Dr. G. A. Leland, of Boston, called attention to the fact that man was not always an upright animal, and that the cavity drained by gravity when he lay down. The establishment of free drainage through the natural openings would often cure the discharge. The Caldwell-Luc operation was in reality a combination of those of Mikulicz and Jansen.

Acute Suppurative Processes in the Faucial Tonsils.

Dr. J. L. Goodale, of Boston, read this paper, which was based upon a study of eight cases of intrafollicular abscesses. He would desire to mention especially the etiological relation of special bacteria to this form of abscess, the relation of the abscess to peritonsillitis, its prognostic significance and its clinical recognition. He spoke of the histological changes of this form of tonsillar inflammation, remarking that streptococci were more numerous than staphylococci. Two of the intratonsillar abscesses had been followed by peritonsillar inflammation. All were characterized by severe infection, as was evidenced by the clinical history, the severe type of fever and the adenitis. In most of the cases, the clinical course of the disease afforded no suggestion of this special lesion. The superficial foci varied in size and number. The fibrinous exudation was more marked than in simple proliferative tonsillitis. Many polynuclear neutrophiles (pus cells) were found in the lymph channels near the base of the tonsils. The pyogenic infection of the follicles seemed secondary to that of the crypts; in the two peritonsillar cases it was evident that a discharge of the abscess into the efferent lymph channels had taken place. The importance of this special lesion was obvious when it was borne in mind that acute pyogenic infection of the follicles might lead to pyemia. Its presence might be suggested by whitish sub-epithelial spots, and by the bursting of the abscess contents through the overlying tonsillar tissue to the surface that condition might be produced which E. J. Moure and other French observers have named "acute ulcerative tonsillitis."

Peritonsillar Abscess.

This paper was read by Dr. G. A. Leland, of Boston. He believed that a thorough discussion of the tonsil was the best method to be followed in these cases. A long incision should be made through

the tonsil from top to bottom, and then the sterilized finger was passed in, and all pus pockets were broken down. Circumtonsillar infection was an extension of the process from the lacune in the direction of least resistance. Cold, rheumatism, etc., did not signify as exciting causes anything but temporary lowering of vitality and of resistance power. The digital method was not dangerous. There was no dangerous hemorrhage. It was very painful, but a few whiffs of an anesthetic might be given. Its advantages were that the abscess was drained from below; there were no relapses, and the patient was able to swallow liquids in six hours and solids in twelve. If the vertical incision was slow in healing, daily applications might be made of tincture of iodine in glycerin. This operation was merely the rejuvenating of a procedure which was followed fifty years ago.

Peritonsillar Abscess Associated with Diphtheria; Report of Case.

This was a paper by Dr. Thomas Hubbard, of Toledo. His first case was that of a farmer, aged thirty years, with acute tonsillitis. On the fifth day a right peritonsillar abscess appeared, and on the next day the trachea showed the presence of false membrane. Anti-toxin was given, but the dyspnea from the tracheal condition became so urgent that a tracheotomy was done. The patient stopped breathing, but was brought to by artificial respiration continued for nearly an hour. Death ensued from pulmonary edema in eighteen hours. The second case illustrated the vagaries of mixed infection, for the various members of the same family suffered from all grades of throat inflammation, from ordinary tonsillitis to fatal diphtheria. In viewing such cases care should be taken to accurately locate the pus, so that the incision for its evacuation should be made through tissue devitalized by softening, and not through healthy tissue, which site might permit a further diphtheritic infection.

Dr. F. C. Cobb, of Boston, showed a series of photographs illustrating wax injections made into the pharyngo-maxillary space. The direction the injected material took was the same as that taken by pus in the course of the evolution of a clinical case.

Dr. Newcomb mentioned a case recently reported by Sendziak in which diphtheria had been followed by multiple abscesses in the various tonsillar structures and double antrum inflammation. Rupture of the peritonsillar abscess on the base of the tongue was followed by a profuse hemorrhage.

A Case of Lipoma of the Tonsil with Microscopical Section.

This paper was read by Dr. T. Amory De Blois, of Boston. The patient was a man aged forty years, who showed a mass the size of a peanut kernel, with a thin pedicle projecting from the upper part of the left tonsil, attached apparently to one of the crypts. It was removed by the hot snare under cocaine. Under the microscope it showed a delicate connective-tissue structure with fatty contents.

Second Day—Tuesday, May 25d.

Discussion: The Relation of Pathological Conditions in the Ethmoid Region of the Nose, and Asthma.

The question of pathology was discussed in a paper by Dr. Henry L. Swain, of New Haven. He asked whether one should consider the nasal condition as the cause or merely as a complication of the asthma, or were they both the outcome of some constitutional vice; and if the latter was true, what was the exact role played by the nasal affection? The conception of asthma which was here assumed was that there existed an irritability of the bronchial structures which might be the result of disease and which was increased by frequent repetition. Next it was assumed that some other structure was abnormal or over-sensitive. An excitation of the latter set up asthma. To connect the two, there was a connecting link in the shape of the vaso-motor system, or, as it was often called, the neurotic habit. The nose, therefore, was only one of the many organs which might stand in a causative relation to the asthma. The next questions to be considered were, what was the initial feature of the attacks, and why did they occur? The most obvious cause was the inhalation into the nares of some direct irritant. In other cases, even with polyps present, the exciting cause was not so clear, especially when the attacks came at about the same time each day. If we gave our patient certain remedies, or sent him away to another climate, some link in the chain was broken, and he did not suffer. The minute he returned to his old environment, he became as great a sufferer as before. In such a case it was evident that the mere presence of the polyps did not explain the attack. The change in environment or in mode of life necessary to break up the vicious sequence might be almost trivial. In one case of the writer's, a change from a feather pillow to a hair pillow at night was sufficient to effect a cure. Various intranasal lesions were present in this case, but their removal did not relieve the asthmatic attacks. But when the pillows were changed, one of the middle turbinates, without any

treatment whatever, diminished in size. Hence we had plainly one cause of nasal disease assured, namely, that certain irritations applied to certain nerve fibres would produce congestion and chronic inflammation with swelling and watery discharge. This led to soaking of the tissues of the middle turbinate region, and edematous hypertrophies appeared, and later these assumed the form of polypi. A peculiar hypersensitiveness of the nerves allowed of such results. This condition might be inherited or acquired. But in either case there seemed to go hand in hand with this a thinness or flabbiness of the vessel walls and a vaso-motor responsiveness to irritation, which made possible the explosions which were the bane of the existence of these afflicted mortals. This peculiar condition of the vessel walls might be the inherent peculiarity of the neurotic subject. Such a theory would account for his neuralgias, headaches, asthmas, dyspepsias, etc., all of which were at the start nothing but vaso-motor explosions. Frequent repetition of the latter might lead to a permanent relaxation of the vessel walls, and thus result in organic disease. In the main, the ethmoidal lesions were of an edematous nature. Asthma was rare with atrophic disease. The lesions, therefore, were hypertrophic in character and at first confined to the mucosa. In a series of sixty cases of asthma, purulent ethmoidal disease was present only three times. Disease of the bony structures without purulent conditions occurred some six or eight times, and was here due to polyp formation. The disease in the mucosa always preceded that of the bone. Spurs and deviations of the septum tended to keep up middle turbinate disease, and increased the possibility of pressure. Hence the immediate question to be solved was how to explain the occurrence of the edematous hypertrophies. Some cause might produce congestion of these, with consequent increase in volume and of vaso-motor sensibility. These congestions were more stormy and more often repeated than in simple hypertrophy, and stretching of the venous trunks occurred. In simple hypertrophies and in non-neurotic subjects the veins were well supplied with muscular coats and soon contracted again to their normal size. But given locally in one small area, or throughout the whole membrane, vaso-motor ataxia or deficiency in the amount of muscle fibre, such as is inherent to the neurotic habit, and the result was inevitable permanent stretching and relaxation. As a result of all this, the intranasal structures became more and more edematous. Then gradually polyp buds began to force themselves through the weakened tissue. Their formation

was favored by pressure and contact areas. If at the same time the bronchial apparatus was diseased or susceptible, any irritant, such as the recumbent position, night air, etc., stimulated the sensitive nerves in the edematous areas and induced an increased flow of blood to the part. Some swelling of the bronchial mucosa also took place, which stimulated the pneumogastric filaments and produced a disturbance in the vaso-motor equilibrium. Our asthmatic patient was then in the toils. If we could remove pressure in the nose, we could remove one great excitant of this train of phenomena. But when intranasal treatment did not effect this happy result, it might be that even the slightest irritant became sufficient to cause bronchial spasm without there actually being any pressure on the contact areas. Of course, there were many asthmatics who did not have this nasal type of the malady. Even here great relief was often afforded by intranasal treatment. These people suffered after excesses of any kind, from an impaired kidney, rheumatic onset, or the recurrence of a menstrual period. But in all the explosion in the bronchi was doubtless through the agency of the vaso-motor system. Many cases baffled us entirely, but oftentimes our reward came by the discovery of some etiological factor quite outside of our ordinary conception of the causation. Occasionally change of environment, and that alone, sufficed to cure the patient. The deduction, therefore, was plain, that when treating many of the pathological conditions of the nose, whether asthma existed or not, we should look outside of the latter organ, and even outside the body, for the causes which led up to them.

Clinical Aspects of the Subject.—This topic was treated by Dr. E. Fletcher Ingals, of Chicago. Asthma in association with polyps was not so common in his experience as seemed to be the case with others. Many persons suffered when riding behind horses or when near a stable. They could ride behind oxen or on a wheel without trouble. In three of his cases, the patients had referred their distress in breathing to one side of the chest only, and they had unilateral lesions in the nose corresponding to the side affected. One patient suffered when living on the ground floor of a house, but was relieved by sleeping in the sixth story. A girl who suffered in a certain house was cured by going to live in the same kind of a house six blocks away. Another patient who suffered in one part of a certain house, was relieved by moving his sleeping quarters to another part of the same house, but which was built out of another material. Some persons suffered while in

town but not when in the country. He had seen some relief from the inhalations of a solution of three per cent cocaine with five per cent of sodium nitrite. This probably caused a reduction of the swelling in the bronchial mucosa.

Treatment.— This was discussed by Dr. F. H. Bosworth, of New York. He said that this whole question turned upon the matter of the respiratory function of the nose. The bronchi were only air conductors, but a relation undoubtedly existed between their mucosa and that of the nasal passages. The true condition in asthma was not a spasm but a vaso-motor paresis. But behind the polyps, the polypoid degeneration, and the edematous hypertrophies was an ethmoiditis. The former indicated it and were its symptoms. Polypoid degeneration of the middle turbinate was pathognomonic of a similar condition in the ethmoid. The cells of the latter burrowed into the turbinate, so to speak, and became its outlying boundary; or, again, they might crowd the turbinate out against the septum and not hollow it out. The trouble was that the anterior and posterior ethmoidal cells became occluded by mild inflammation, as from cold. This was one of the adventitious results of chronic inflammation of the nasal mucosa. In the ethmoid cavities this change took on an edematous character, and intracellular pressure caused distention. Now came the neurotic symptoms. Probably the vaso-motor centers for this division of the body were not far from the ethmoid. The indication, then, was to cure the ethmoiditis. We must relieve the intracellular pressure and break down the honeycombed mass. The operation must be radical. The removal of polyps was not enough. We must uncap the egg-shell-like ethmoid and remove the points of contact principally because they encroached upon the nasal lumen. Personally he did not find the curette, forceps or gouge satisfactory. He preferred to use small burrs, rounded and ovoid. We should burr down, then stop and use the burr as a probe; burr down again, and so continue until we had established free drainage. He had never had had results from this procedure. He formerly believed that if cocaine did not relieve the asthmatic seizure, an intranasal operation was useless, but he had modified this view. Purulent ethmoid disease did not give asthma, but inflammatory disease did. Many colds in the head, so-called, were doubtless acute ethmoiditis.

Dr. E. L. Shurly opened the general discussion, saying that the question was a difficult one to settle owing to the complex physiology of the vaso-motor system. We should go further back than ethmoiditis and edematous rhinitis. Recent observations had

shown the existence of fine filaments from the cranial nerves and spinal centers, and that they were conducting cables having in the same strand nerve channels for various functions. In different animals and in different individuals of the same group there was a difference in the arrangement of those branches connecting the nerve trunks. These anatomical variations might explain the differences in various individuals. Again the nose was the seat of the olfactory sense, though in man this was very rudimentary. Hyperesthesia might result from breaks in the insulation, so to speak, in these various sensory filaments. We must divide our asthma cases into those which were due to local disease and those due to psychical causes. He did not believe that the bronchi were merely air conduits. There was a special arrangement of the adenoid tissue in them about which we knew but little. The cilia in the bronchi had an important office in expelling secretion. In his experience, the majority of asthmatic cases were not accompanied by sensible derangement of the nose.

Dr. J. N. Mackenzie said that the primal course of asthma did not reside in any special peripheral organ, but in the individual himself. The area of nerve explosion depended on the seat of the local pathological process. Irritation might come from a peripheral organ as the nose, a distant organ as the uterus, or from some systemic dyscrasia as gout or rheumatism. Contact areas or pressure points cut no figure in this theory. Nasal cough might come from atrophy as well as from hypertrophy. The explanation of all these facts was not to be found in alterations of the nasal or bronchial function, for all of the theories thus far advanced failed to come up to the requirements of a logical hypothesis. All polypoid degeneration was not due to ethmoid disease, as could be proved by both clinical and pathological data. In treating these cases, it is useless to temporize with the curette. The forceps and gouge had been useful in his hands. It was often advisable to remove the anterior end of the middle turbinate, and this could readily be done with the snare.

Dr. Makuen said that asthma depended upon faulty nervinmuscular action, which might arise from any one of a thousand causes.

Dr. Thomas Hubbard called attention to the autotoxemia theory, the importance of which he thought was underestimated. This might be of two types, gastro-enteric infection and defective elimination.

Recurrence of the Tonsils After Excision; a Case of Hysterical Larynx.

This was a paper by Dr. F. E. Hopkins, of Springfield, Mass. The particulars of these cases will be found in *THE LARYNGOSCOPE* for February, 1899, page 97. Under the first heading, Dr. Hopkins' gave a *resume* of the teaching upon the subject from the literature of modern laryngology.

Wednesday, May 24th—Closing Session.

The session opened with a general discussion of Dr. Hopkins' paper upon the subject of the recurrence of the tonsils after excision. Dr. Farlow said that a partial removal might leave behind diseased tissue, especially in the lower prolongation of the organ, which was its hardest part. Friction of the tongue at this point might set up irritation which would lead to recurrence. The instrument usually employed was the guillotine, but the ideal instrument was one which would get in between the faucial pillars, anterior and posterior. The borders of the pillars were not the landmarks of the amount of tissue, but the bulk of the tissue itself. He preferred in many cases the scissors and punch. In many young adults there was developed the plica triangularis or fold of tissue running down across the anterior portion of the tonsil, which was often mistaken for a part of the faucial pillar itself. It should be removed along with the tonsil.

Dr. Newcomb said he thought that in institution patients recurrence was favored by the fact that they were obliged to return to the same general bad environment which had been such a potent factor in the development of the original disease.

Dr. Woolen said that a tonsil could not return if it was once removed. He looked upon the tonsil as upon a wart or papilloma, removal of which might or might not be necessary. He had given up the use of the word "removal" in this connection and used "enucleation" instead. Enucleation could be done with the guillotine if properly constructed. He preferred the French instrument with the fork removed. The tonsil was at the same time lifted from its bed with the vulsellum. The nubbins of tissue left behind in imperfect removal might excite a later quinsy. He was accustomed to test the tonsil after removal by passing a blunt probe down to the bottom of its crypts. If he found a solid bottom, he felt that he had done a complete operation, but if the probe passed all the way through the mass removed, he felt that he had not gone deeply enough.

Dr. D. Braden Kyle said he would look upon a recurrent tonsil as purely pathological. It was a benign hyperplasia. It was the large, soft, spongy tonsil which was apt to recur. Recurring masses were more tumorous than tonsils, and were to be regarded as on the order of adenomata.

Dr. Makuen dwelt upon the importance of dissecting away the faucial pillars from the tonsils, and had constructed a special set of knives for this purpose.

Fibro-Lipoma of the Base of the Tongue.

This was a report of a case by Dr. E. Fletcher Ingals, of Chicago. His patient was a farmer, aged twenty-eight years, who for three or four years previous had suffered from difficulty in speaking, swallowing and breathing. Some time previous to his coming under observation, the cautery along with scissors and snare had been applied with some relief. For the last two months all the symptoms had been aggravated, especially dyspnea on lying down. On examination a smooth tumor with congested surface could be seen situated in the laryngo-pharynx, apparently attached to the right two-thirds of the tongue and the right pharyngeal wall. It seemed to be of a fibrous nature. Removal with the cold wire (No. 5) snare was attempted, but the wire broke three times. A uterine écraseur carrying a No. 8 wire, properly bent, proved to be the ideal instrument. One large mass measuring from one inch to an inch and a quarter in its various diameters was removed at the first sitting, and later other smaller masses were removed. Some were fibrous, some fatty and others were of the mixed type. Attachment was found to be to the right side of the epiglottis, the right pharyngo-epiglottidean fold, the right side of the pharynx and possibly the base of the tongue. The patient had been seen that very day, and it was noted that there was an adhesion between the epiglottis and the right side of the pharynx and the base of the tongue. This would prevent the epiglottis from shutting down over the larynx during deglutition, but there was no difficulty in swallowing.

Dr. Woolen said he had seen a similar case. The wire had been slipped over the growth several times, as he had shown the case to students to demonstrate the mode of removal. When operation was finally attempted the patient suddenly ceased to breathe. After resuscitation, the attempt was again made, and just as the wire was tightened cessation of breathing again occurred, and this time resulted fatally. No anesthetic, local or general, had been used. If such had been the case and death had ensued, it would have been attributed in all probability to the anesthetic.

Confined Suppuration of the Frontal Sinus with Spontaneous Rupture, Including the Report of a Case.

This paper was read by Dr. D. Braden Kyle, of Philadelphia. The patient was a woman, aged sixty years, who was seen first in January, 1898. Her complaint had begun a short time before with an initial fulness at the inner angle of the left orbit and a profuse nasal discharge. The face was swollen on the same side, and there was a slight tenderness. She had an influenza about this time, but this complication did not seem to increase any of the original symptoms. Two months later there was an increase in the size of the orbital swelling, and finally pus appeared through an opening on the forehead a little to the left of the median line. Dr. Kyle had been unable to find any case identical with his own in all particulars. Several closely resembled it, and brief notes from their clinical histories were given.

The Importance of Septa and Pockets in the Antrum of High- more with Reference to Operation.

This was a paper by Dr. John O. Roe, of Rochester. He said that too little consideration had been paid to the anatomical details of this cavity. Four features should always be taken into consideration with reference to operation: The position of the sinus; its size, shape and conformation; the thickness of its walls, and the relation to it of the roots of the teeth. He exhibited a series of skulls which had been prepared to illustrate these points. He also exhibited an antrum-searcher, which consisted of a flexible wire spring with probe point. It ran in a cannula and could be extruded from the latter after it had been passed into the antrum. In this way it was possible to get a very accurate idea of the interior of the cavity even through a very small opening.

Dr. Mackenzie did not think that septa often interfered with operations upon the sinus. He would operate only in extreme grades of inflammation. He would also call attention to the fact that the ostium maxillare might be above and posterior to its normal site. In such case, the pus might appear up in the nasopharynx. Politzerization of the sinus through the ostium would often relieve the pain and enable us to determine its exact site. As to drainage tubes, he thought that they were often pus-producers.

Dr. Roe, in closing the discussion, said that he preferred a fine saw for enlarging the opening in the antrum after it had been penetrated. Gouges often splintered the bone.

"Taking Cold."

This paper was read by Dr. G. V. Woolen, of Indianapolis. He reviewed the extant theories upon the subject. External influences were reflected upon internal surfaces, thereby causing nutritional disturbances. The latter acted by producing deficient calorification. Persons who habitually took cold, frequently had a subnormal temperature, as low at times as 95° F. They appeared as a rule properly nourished, but this subnormal temperature might explain much of their indefinite malaise. In this condition of deficient body heat there was defective hematosiis, which probably acted through the vaso-motor system. The condition was frequently set up by improper care as to bathing, etc., during the first week of life. It might be the reflection of hereditary syphilis in the third or fourth generation. If a child passed into adolescence without acquiring the habit of taking cold, he regarded it as safe for life. Nasal stenosis might also lead to defective hematosiis and low body temperature.

Dr. Goodale called attention to the influence of micro-organisms in producing what we call a "cold." They acted through the adenoid or lymphoid tissue. The symptoms of a cold were those of a bacterial infection. In moderate cases the staphylococcus, and in severe cases the streptococcus, predominated.

Dr. Bosworth said that the onset of a coryza was frequently too quick to allow of micro-organisms having anything to do with the case as causative factors. Acute rhinitis was a manifestation of a general systemic disturbance. The regulation of the function of the skin was of the utmost importance. Prophylaxis could be summed up in two words—proper clothing and the cold bath.

A Report of the Operative Treatment of Several Cases of Frontal and Maxillary Sinusitis.

Dr. Frank Whitehill Hinkel, of Buffalo, contributed a paper which gave the histories of one case of frontal and three cases of antral disease. The first was that of a man, aged thirty-eight years, who had influenza in February, 1898, with severe pain over the left eye, followed by offensive purulent discharge from the left naris. He came under observation seven months later with persistence of the discharge. Pain and tenderness over the eyeball were at times present. Examination showed disease of both the frontal and maxillary sinuses. The alveolus was opened, and irrigation begun, which nearly stopped the nasal discharge, but not quite. Some weeks afterward the pa-

tient reported an increase of symptoms referable to the left frontal region, and opening of the sinus was recommended. The operation was done in January of the present year, and the sinus was found to be filled with greenish pus. It was thoroughly irrigated, and its walls were curetted. The fronto-nasal canal was enlarged, and a strip of iodoform gauze was introduced into the nasal chamber through the enlarged infundibulum, as suggested by Bryan. The external wound was closed by silk sutures. After suturing, the wound was dressed with cotton pad and bandage. Dr. Hinkel said he preferred this to any form of collodion dressing, as the difficulty of securing good union after evacuation was increased by any dressing that confined the exudate about the wound and prevented evaporation. The drain was taken out on the third day, and the stitches were removed on the sixth. Recovery was uneventful, and the patient was permanently cured. The points of interest in the case were the masking of the primary frontal empyema by the signs and symptoms of the secondary antral abscess, the persistence of the antral discharge in spite of the drainage and cleansing, and its immediate cessation as soon as drainage of the frontal sinus was secured.

Dr. Hinkel also reported three cases of antral disease. He followed the Caldwell-Luc method exploited in the paper by Dr. Roaldes. He found the hemorrhage following the gingivo-labial incision to be lessened by the injection of a one per cent solution of cocaine beneath the mucosa just as the anesthetic was about to be administered. In one case in which he had been treating the antrum through a cannula beneath the inferior turbinate, he was able to reduce the hemorrhage that was so profuse when the antrum was opened, by injecting into it just before the operation about a drachm of the solution of suprarenal extract. The limitations of this operation for antral disease, and the proper choice of cases for its performance, would be facilitated by the reports of its results, whether successful or otherwise. Dr. Hinkel had found the introduction of the drainage tube to be the most difficult step in the operation. To facilitate this he had had made a modification on a small scale of Bellocq's cannula. Introduced into the nose with the probe point thrust upward and forward into the antrum, it readily brought into reach the ligature, to which the drainage tube or strip of gauze could be attached and then drawn through the opening in the nasal wall and out at the nostril. The suturing of the gingivo-labial incision did not seem, according to Dr. Hinkel's experience, necessary. It was difficult to keep the stitches

already inserted from being somewhat torn out during the later stitching, on account of the manner in which the parts must be drawn upon to secure access to the lips of the wound. The parts coapted readily without stitches, and there was little motion at this point. The wound did not need to be disturbed if the patient was fed upon soft food, care being taken to use the opposite side of the mouth in eating and to avoid violent blowing of the nose. Under these precautions, healing took place readily, as shown by the cases narrated.

During the congress the following additional papers were read by title: "Dermoid Cyst of the Nose," by Dr. H. S. Birkett, of Montreal; "Atrophic Rhinitis, with Report of Cases," by Dr. James E. Logan, of Kansas City; "Tuberculosis of the Pharynx, with Report of a Case in a Child," by Dr. T. Melville Hardie, of Chicago; "Syphilis of the Antrum of Highmore," by Dr. H. L. Wagner, of San Francisco; "Report of Two Cases of Accessory Thyroid Gland at the Base of Tongue," by Dr. A. W. Watson, of Philadelphia; "Remarks on Intra-Nasal Operations," by Dr. W. F. Chappell, of New York; "Pemphigus of the Larynx," by Dr. J. H. Bryan, of Washington; "The Early Diagnosis of Aneurism of the Aortic Arch," by Dr. William Porter, of St. Louis; "Report of a Case of Abscess of the Frontal, Ethmoidal and Sphenoidal Sinuses; Meningitis; Death," by Dr. J. H. Bryan, of Washington.

This closed the scientific proceedings of the Congress. The next meeting of the Association will be held at Washington in connection with the Triennial Congress of the Association of American Physicians.

During the executive sessions of the Congress, the following gentlemen were elected to active fellowship:

Dr. F. C. Cobb, of Boston: Thesis, "Peritonsillar Abscess." Dr. J. F. McKernon, of New York: Thesis, "A Contribution to the Technique of Modern Uranoplasty." Dr. Max Thorne, of Cincinnati: Thesis, "Direct Examination of the Larynx in Children."

The election of officers for the ensuing year resulted as follows: President, Dr. Samuel Johnston, of Baltimore; First Vice-President, Dr. T. Amory De Blois, of Boston; Second Vice-President, Dr. Moreau Brown, of Chicago; Secretary and Treasurer, Dr. Henry L. Swain, of New Haven; Librarian, Dr. J. H. Bryan, of Washington; Member of Council, Dr. William E. Casselberry, of Chicago.

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ANNOUNCEMENT.

In severing my connection with THE LARYNGOSCOPE as one of its editors and proprietors, I desire to thank my many friends—those who have so ably assisted in the editorial work, those who have so generously contributed the fruits of their pen and those who have supported the journal by their subscriptions—for their assistance, and respectfully and earnestly request not only a continuance, but an increase in their good will and friendly feeling.

I think I may safely say that no journal of its class has given its readers more and better material in the same space of time. Its contents during the past three years justifies its birth.

As a parent watches the career of a favored and talented child, so will I watch THE LARYNGOSCOPE, feeling certain of its future in the hands of my confrere, and I will always be proud of having been one of its founders.

Having disposed of my interests to Dr. M. A. Goldstein, I now, for the last time, inscribe my name on its editorial page.

FRANK M. RUMBOLD.

The retirement from the editorial field of my esteemed confrere, Dr. F. M. Rumbold, is a matter of much regret to his many friends and to me, and I would express the hope that we may still be favored with his counsel, for, as a veteran in medical journalism, his experience has proven a valuable factor to the success which *THE LARYNGOSCOPE* has so quickly acquired.

In assuming all duties and responsibilities connected with the management of *THE LARYNGOSCOPE*, the policy of the journal will not be altered in the slightest degree.

The policy of the future, as of the past, will be to strengthen every feature of *THE LARYNGOSCOPE* to its fullest extent, to raise its standard to the highest degree of literary excellence, to secure the best literary material for its columns, to receive the endorsement of every active worker in otology and laryngology in every section of the English-speaking world and to command the respect of the entire medical profession.

Our efforts shall be directed to an equal representation of otology, rhinology and laryngology, both in the original and abstract departments of the Journal.

The recognized ability of our contributors and the character of our original columns warrants the conclusion that our influence will be far reaching, and it is our purpose to uphold *THE LARYNGOSCOPE* as an honest and fearless exponent of progressive otology and laryngology.

Additional space has been provided for the reports of proceedings of our various representative, national and international, otologic, rhinologic and laryngologic associations.

As heretofore, the department of Abstracts and Bibliography will be made an important feature; we are pleased to report that the editorial staff of *THE LARYNGOSCOPE* has now instituted a system by which the entire special medical literature falling within our field will be placed at the disposal of our readers in complete, carefully-prepared abstracts.

Our editorial staff has been strengthened by the addition of Dr. Fayette C. Ewing of St. Louis, who will arrange and edit this department.

With the continued co-operation of our excellent editorial staff, the active endorsement of our contributors and subscribers, and the renewed support of our patrons, we are justified in predicting steady improvement for *THE LARYNGOSCOPE*.

M. A. GOLDSTEIN.

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

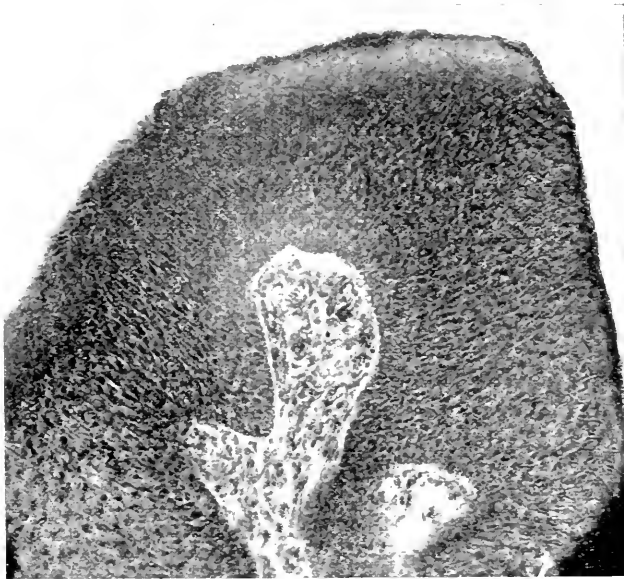
FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

I. NOSE.

Papilloma of the Nasal Cavity—RICHMOND MCKINNEY—V. V.
Med. Journ., March 4, 1899.



Contains a brief review of papilloma of the nasal cavity with report of case. Case presented as follows: W. B. M., aged

twenty-four, medical student, had noticed something which felt like a crust of mucus in the left naris on upper anterior portion of the septum for about six months. No discomfort was experienced other than stenosis. This was not relieved by an attempt to clear the nose. Has had occasional slight hemorrhages from



this naris. Examination revealed a growth about the size of a coffee bean, attached to the upper anterior portion of the cartilaginous septum behind the tubercle. The growth had a warty, mammillated, raspberry-like appearance, and was of a dull pink color. The growth was removed with a cold snare and the base cauterized with the electro-cautery. Six months later there had been no recurrence. Microscopically the diagnosis of papilloma was verified.

GOLDSTILIN.

A Contribution to the Study and Treatment of Bleeding Polypi of the Nasal Septum—II. DUGROUAX—*Revue Hebdomadaire de Laryngologie, etc.*, Jan. 28, 1899.

The diagnosis is easy and prognosis favorable. Treatment consists of removal of the growth by means of the galvanic snare in order to avoid hemorrhage.

SCHLIEPPEGRILL.

A Case of So-Called Acute Idiopathic Perichondritis of the Nasal Septum—ZUMEROICH—*Wiener Klin. Woch.*, May 11, 1899.

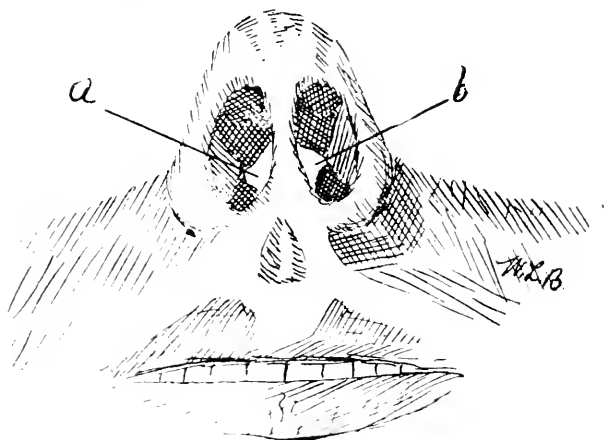
At a meeting of the Medical Society of Greifswald, held February 4th, Dr. Zumbroich demonstrated a case of so-called idiopathic acute perichondritis of the nasal septum. The most careful investigation failed to reveal any cause for the inflammation, and it was therefore placed in the class of idiopathic perichondritides first described by Clinton Wagner, of New York.

The patient was seventeen years of age. He was attacked by a general chill followed by fever. Redness and swelling of the nose followed. On examination, a massive swelling on each side of the septum filled up both nostrils. As fluctuation was present the tumor was incised and a free discharge of pus followed. The usual causes are trauma, syphilis, etc. VITUM.

Nasal Polypus—CUNDEL JULER—*Jour. Am. Med. Assn.*, March 25, 1899.

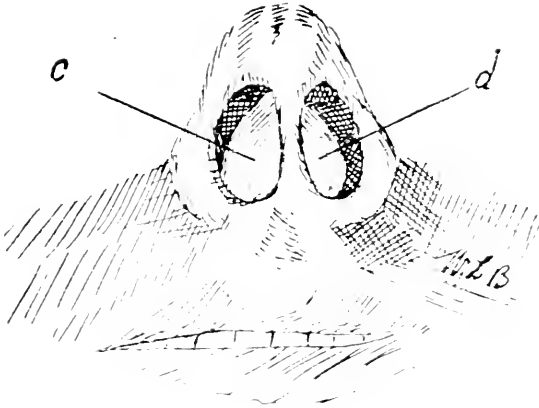
The author quotes from Bosworth, describing the mucous covering of the middle turbinals as "water soaked," and accounts for the subsequent pyriform growth by the anterior stenosis and suction action in hawking, sniffing and nose-blowing. Asthma and other reflex neuroses have been connected with polypi by some writers. Cocaine applied to the turbinals on pledgets of cotton aids in searching for these growths by shrinking the swollen mucous membrane. Removal with the cold snare, followed by constitutional treatment to tone the system, will result satisfactorily. As these growths tend to return, the base should be cauterized after removal. Should hemorrhage occur, a ten per cent solution of cocaine or a five per cent solution of antipyrin will ordinarily arrest the bleeding. Plugging of the nostrils may become necessary. DETWILER.

Abscess of the Nasal Septum—W. L. BALLENGER—*Memphis Lancet*, March, 1899.

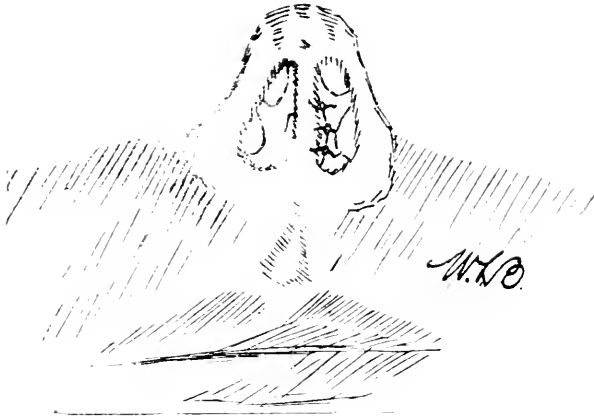


The author reports two cases of abscess of the septum. Case I presents two distinct cartilaginous spurs, one upon either side,

located anteriorly upon the triangular cartilage at its junction with the vomer. Four days after the removal of one spur, typical septal abscess developed. Whether the infection occurred at the time of



operation or subsequently is not stated. Nasal respiration was completely obstructed. Treatment consisted of free incision upon



either side of the septum, evacuation of pus, irrigation with warm boracic acid solution and dusting with aristol and loosely packing the anterior nares with sterilized gauze.

Case II.—Bony spur upon the right side of the septum two inches from the anterior nares. Inferior portion of triangular cartilage deflected to the left, thus encroaching upon the respiratory space of that side. Spur was removed with the Bosworth saw. A linear incision was made along the line of greatest prominence over the deflected septal cartilage. A rectangular piece of cartilage was excised and the wound closed with three horse-hair sutures. GOLDSTEIN.

The Relations Existing Between Certain Affections of the Nose and Throat and Eye Diseases—ERNST WINCKLER—*Klinische Vorträge aus dem Gebiete der Otologie und Pharyngo-Rhinologie*, Band iii. Heft 1. 1899.

This appears to be a sort of second edition of the author's work "On the Connection between Nasal and Ocular Disease," which appeared in Bresgen's *Sammlung* last year, and which was briefly reviewed in the April number of the LARYNGOSCOPE for 1899. The title is somewhat different, the order of subjects is changed slightly, and much new and valuable matter has been added. VITTM.

Epistaxis—BOYD CORNICK—*Jour. Amer. Med. Association*, March 25, 1899.

The author notes the frequent failure of the ordinary methods of treating nose-bleeding, and says: "All that I have found necessary has been to fashion with a pair of scissors a dry plug of prepared sponge, in size and length comparable with the little finger of a twelve-year-old boy. This should be carefully soaked in boiled water to free it of grit, squeezed dry to free it of unnecessary fluid, and inserted its full length, gently, along the floor of the bleeding nostril. No styptic is necessary: it would be needlessly irritant. The expansive pressure of the soft sponge against the bleeding site, increased by the coagulation of a few drops of blood in its interstices, will check the bleeding at once. Remove it in twelve hours. Under no circumstance let it remain longer than twenty-four. Melted vaselin containing five per cent of carbolic acid applied with a medicine dropper in liberal quantities is the only local treatment called for afterward. DETWILER.

Headache, Ocular and Nasal—J. A. WHITE—*Charlotte Med. Jour.*, February, 1899.

Headaches from ocular and nasal causes are of frequent occurrence. In addition to local treatment, both topical and surgical, proper regard should be given to any existing dyscrasia or constitutional disturbances, whether of the digestive or circulatory apparatus, and especially the correction of any tendency to lithemia by regulation of the diet and appropriate remedies. SCHEPPEGRELL.

General Considerations of the Mucous Membranes of the Upper Respiratory Tract—D. BRADEN KYLE—*Internat. Medical Magazine*, March, 1899.

The author in continuing this subject calls attention to the irritation of mucous membranes resulting from the elimination by this tissue of the irritating substances absorbed from the intestinal tract in chronic constipation. In addition, any obstruction causes slowing of the intestinal venous current and consequent general damming back of blood. Over-distension and thinning of vessel walls result, inducing edema, which resists all local treatment. In dealing with this condition of the nasal and pharyngeal mucosa, the knife and cautery must be avoided and attention be directed to the removal of the cause. This is true as a rule of children who are mouth-breathers at *night only*. When mouth-breathing is present day and night surgical removal of the obstruction is ordinarily demanded.

DETWILER.

Uricacidemia as the Cause of Hay Fever and Asthma—JNO. DUNN—*Charlotte Med. Jour.*, February, 1899.

Before the usual paroxysm develops, the patient should be instructed in regard to diet, exercise, bathing, etc. This will be found more efficacious than any other system of local treatment.

SCHLEPPGRIFF.

II. MOUTH AND NASO-PHARYNX.

Pemphigus of the Mucous Membranes—M. MUNZEL—*Centralblatt für Grenzgebiete der Med. und Chirurg.*, Mar. 1 and 15, '99.

This is a voluminous review, running through two numbers of the journal mentioned. After some general remarks, the subject is treated under several different headings, as follows: Symptoms, Course, Diagnosis, Prognosis, Etiology, Therapy. To the whole is appended a copious bibliography. Under the heading "diagnosis," the author gives the following as the main points upon which to rest a diagnosis of pemphigus:

1. The presence of clear watery blebs, which may be seen at times, either intact or burst. In place of these may be seen large or small clear white or grayish exudative membranes, with irregular but sharply defined edges resting on a highly inflamed base. In place of these, again, may be seen red spots free from membrane, possessing sharp contours and looking as though they had been varnished.
2. The normal condition of those parts of the mucous membrane not invaded by the disease.
3. The wholly apyretic course of the disease, the lack of all serious general symptoms and the chronicity of the entire process.
4. The frequent concomitant affection of both conjunctivæ.
5. The occasional appearance of scars or adhesions of opposed mucous surfaces.
6. The usefulness of all forms of treatment.

VITTM.

Urticaria of the Mucous Membrane—THILLIEZ AND COCHY DE MONCAN—*Revue Hebdomadaire de Laryngologie, etc.*, Jan. 14, 1899.

A report of a case in which the lesions appeared in the conjunctival, buccal, pharyngeal and laryngeal mucosa. At times the mucous membrane of the larynx was so affected that it caused marked dyspnea.

SCHEPPEGRELL.

Removal of Posterior Hypertrophies of the Lower Turbinal—

OSTMANN—*Archiv für Laryngol.*, Band ix, Heft 2, 1899.

The author advises a curved incision with the electro-cautery knife from the upper posterior portion of the lower turbinal extending down to near the lower border and then running forward parallel with it. This incision if deeply made, the author says, will destroy the principal blood supply of the posterior extremity; he then removes the latter by the cold snare. By this means he is enabled to avoid the disagreeable hemorrhage which sometimes follows the use of the cold snare alone, and, on the other hand, he avoids the presence of a considerable suppurating surface in close proximity to the opening of the Eustachian tube, such as is left when the cautery snare is used. Another advantage claimed for this procedure is that the posterior hypertrophy is said to drop down after such an incision, so that it can hardly fail to be grasped by the loop when it is introduced.

VITTUM.

The Submerged Tonsil—EDWIN PYNCHON—*Annals of Surgery*, June, 1898.

Under this caption the author designates that condition of the faucial tonsil, so frequently observed in cases of faucial and pharyngeal inflammation, more or less chronic in character, accompanied by follicular hypertrophy, predisposition to "sore throat," irritable and sensitive pharynx and similar conditions.

The theory advanced is, "that through the evolution due to nature's effort toward absorption, the originally hypertrophied tonsil has become partially atrophied and largely submerged, the submersion being as much due to pillar hypertrophy as to tonsillar atrophy."

The orthodox methods of tonsillotomy are held responsible for the development of many of these cases. The adhesions and thickening of the faucial pillars impair function in vocalization, fill spaces abnormally, and mechanically irritate the areas which are involved.

The author advocates total removal of the diseased tissue, and employs electro-cautery dissection for this purpose.

The instruments used in this work and the technique of the operation were described and illustrated in *THE LARYNGOSCOPE*, February, 1897.

GOLDSTEIN.

The Faucial Tonsil — GILFORD B. SWEENEY — *Jour. Amer. Med. Assn.*, March 25, 1899.

The author, considering that systemic manifestations have their origin in a morbid state of the tonsil, says: "The tonsil while in a state of inflammation is a frequent and common source of morbid processes which, ultimately, affect the entire human economy. Systemic infection or diphtheria, scarlatina, follicular tonsillitis, rheumatic fever, some forms of tuberculosis and typhoid fever has its origin in a vulnerable tonsil, as well as other infection that would otherwise perish before gaining entrance to the body."

After discussing the various theories of the origin of rheumatism he concludes that the clinical study of acute rheumatism suggests defective elimination, and a specific bacterium which, having gained entrance to the body, is fostered and nourished by the products of retarded elimination while it wages war upon the normal leucocyte. Investigation will also prove that the tonsil is the gateway of infection in many a case of tuberculosis. Referring to typhoid and malarial fevers, he concludes that the tonsil, being an open gateway for infection, is as plausible a point of entrance as Peyer's patches or Brunner's glands. He insists on the radical extirpation of diseased tonsils by means of the tonsillotome.

Richards thinks it is not possible to remove the tonsil so thoroughly as to obviate all danger of infection through the glands. Coulter regards the cautery as superior to the tonsillotome in this work.

DEIWILER.

Lipoma of the Tonsil — PROF. A. ONODI — *Archiv. für Laryngol.*, Band ix, Heft 2, 1899.

A report of two cases. One of pure lipoma and one of fibrolipoma. The cases are reported on account of the rarity of benign tumors of the tonsil.

VITTIUM.

Latent Tuberculosis of the Tonsil — HUGH WALSHAM — *Lancet*, June 18, 1898.

Out of the thirty-four consecutive post-mortems the author found the tonsils to be more or less tuberculous in twenty. Presumably this conclusion was based on the discovery of giant cells, as there is no mention of tubercle bacilli being found. It is also to be concluded that all the post-mortems were on patients who had died of pulmonary tuberculosis. Microscopical examination of tonsils and adenoid vegetations removed from living subjects proved entirely negative. Reference is made to the well-known observations of Lermoyez.

STCLAIR THOMSON.

A Case of Pendulous Tonsil — PAUL REINHARD — *Wiener Klin. Wochenschr.*, April 6, 1899.

The tumor which proved to be an accessory tonsil was attached to the left tonsil, which was itself hypertrophied. The pedicle was

$\frac{1}{2}$ cm. thick and a little longer. It was attached to the upper posterior portion of the tonsil and to the posterior pillar. The tumor itself was globular and about 2 cm. in diameter. It crowded the uvula over to the right. In appearance it was tense, and here and there showed little globular elevations which had a yellowish appearance at the top. The otherwise smooth surface also showed occasional crater-like excavations. A few irregular fibrous bands could be seen running over the surface. It was easily removed by the cautery snare, and when cut across the above-mentioned elevations and depressions poured out a thick yellowish fluid.

VITUM.

III. ACCESSORY SINUSES.

Disease of the Frontal Sinus—ADOLPH O. PFINGST—*The Medical Age*, March 10, 1899.

Disease of the frontal sinus is frequently a factor in frontal headache. Inflammation of these cavities is most frequently accompanied by a serous exudation, which accumulates in the sinus. Treatment must be directed primarily to any nasal obstruction that may be present. Probing is usually futile. Nasal sprays and steam inhalations should be used. Moist heat over the sinus adds comfort.

In operating, the aim is to secure free drainage into the nose and to empty and cleanse the sinus.

Incise from the supraorbital notch along supraorbital ridge to the median line, then upward from one to one and a half inches. Turn back the flap and remove a button of bone close to the median line. Cleanse and curette the cavity. Probe and enlarge the fronto-nasal duct and insert a self-retaining rubber catheter. Suture the incision, leaving a drainage tube in the wound a couple of days. It is sometimes necessary to make the incision below the supraorbital ridge, but it is then more difficult to probe the fronto-nasal duct.

JEFFERS.

A Sequestrum in the Superior Maxilla Following Drilling into the Antrum—GUSTAVE SPIESS—*Archiv für Laryngol.*, Band ix, Heft 2, 1899.

The operation was done for the purpose of effecting free drainage in an empyema of long standing. The drilling was easily accomplished, although it took some time to cut through. A marked tenderness of the part seemed to follow. Four months later a sequestrum was removed which included the entire opening made by the drill. The author is inclined to attribute this result to the fact that the bone became overheated by the rapid revolutions of the drill. He advises therefore the use of a drill which is slightly tapered from its cutting end backward toward the handle. In this way all friction between the bone and the instrument would be avoided.

VITUM.

IV. LARYNX AND TRACHEA.

The Diagnostic Value of Affections of the Epiglottis in Typhoid Fever.—G. KOBLER—*Wiener Klin. Rundschau*, April 23, 1899.

Three cases of typhoid accompanied by general thickening of the epiglottis. The organ was about three times as thick as in the normal state, and along the free edge were situated ulcerations which had loosened edges and were covered with a yellowish deposit. At the end of the fever the ulcerations gradually healed and left a well-marked cicatricial condition of the edge of the epiglottis. The author wishes to emphasize the value of this sign in making a diagnosis of typhoid. He says too that the epiglottic symptoms run a parallel course with the intestinal lesion; and that one can therefore tell whether the intestinal inflammation is still active or not, by making a laryngoscopic examination. He further warns against mistaking the cicatricial condition of the epiglottis for a manifestation of syphilis, etc.

VILLUM.

The Bete Noir of the Vocalist—EDWIN PYNCHON—*The Alkaloidal Clinic*, April, 1899.

Hoarseness and its etiology is treated of in a rather exhaustive manner in this number, a subsequent number giving the treatment.

Hoarseness seldom affects those who make no special use of the voice. Hoarseness in those who do make special use of the voice can usually be traced to improper methods of vocalization. Vocal efforts should cease when hoarseness begins to manifest itself. Another cause is inspiring a poor quality of air, rendered so by being charged with dust, excessive moisture, gases and other impurities. All these causes, acting singly or together, produce congestion, redness and thickening of the structures of the larynx, disturbing that nice approximation of parts which is so necessary to the production of pure phonation. New growths, destructive processes, paralysis, hysteria and traumatism are important causes of hoarseness. Structural deformities of the larynx play an important role, as well as catarrh of the naso-pharynx and tonsillar disease. Mal-secretions from low grade inflammations are frequently a source of harm to the larynx from their irritating qualities.

JEFFERS.

The Bete Noir of the Vocalist—EDWIN PYNCHON—*The Alkaloidal Clinic*, May, 1899.

Continuing from the April issue, Dr. Pynchon says great care should be used in selecting a vocal teacher, since hoarseness may result from faulty vocalization and improper breathing. The nose and throat should be put into the best possible condition before beginning vocal studies. Faults in the diet should be removed and the free use of tobacco and alcohol prohibited. Dyspepsia, constipation and torpidity of the liver should be corrected. Some appliances, designed for the local treatment of the nasal, facial and laryngeal mucous membrane, are illustrated. Alkaline and astringent sprays, camphor-menthol solutions in lavoline and compound tincture of benzoin with oil of eucalyptus and castor oil are suitable applications.

Acute laryngitis should be treated by rest of the voice and inhalations of steam medicated with compound tincture of benzoin, turpentine or phenol and tincture of iodine. Amorphous aconitine in small doses should be given hourly. The subacute form may be treated by the application of solutions of zinc chloride, silver nitrate or alumnol. The chronic form is often treated by the writer with Keith's concentrated tincture of collinsonia and glyc-erine, of each one-half ounce, nitrate of sanguinarine two grains, oil of stillingia (Keith) one-half drachm. Mix. Dose: Ten drops on sugar, to be eaten slowly, every three hours or oftener.

Nasal or pharyngeal obstructions should be removed by surgical means. DETWILER.

Functional Dysphagia—STCLAIR THOMSON—*Lancet*, December 3, 1898.

After sketching the physiology of deglutition, the two forms under which functional dysphagia may appear are described, viz., a paralytic and a spasmodic form. The etiology and symptoms of the affection are described, and the differential points of diagnosis indicated. Stress is laid on the importance in every case of dysphagia of making a thorough inspection of the upper air passages, and of making a complete examination of the chest before passing an esophageal bougie. The possible risks associated with the latter method of examination are referred to. Auscultation of the esophagus is described. As regards treatment, the writer mentions that the immediate effect of passing a bougie was generally satisfactory, but that if the further histories of these cases were obtained it was frequently discovered that relapses were not uncommon. It was therefore important to follow up the immediate relief by strongly suggestive treatment, by attention to anemia, by the removal of any possible source of reflex irritation, and, in short, by the whole armamentarium against hysteria. In conclusion, he points out that, after all, the most common affection of the esophagus was carcinoma: that when a case of dysphagia presented itself, malignant disease should be the first suggestion which presented itself; and that the possibility of aneurism and other forms of ulceration (traumatic, syphilitic and tubercular) should be excluded before the diagnosis of its being a functional disorder was decided upon.

STCLAIR THOMSON.

Spasm of the Tensors of the Vocal Cords—JNO. E. RHODES—*N. Y. Med. Jour.*, Feb. 25, 1899.

A study of the cases reported justified the conclusion that the disease is of neuropathic origin, probably located in the motor areas of the medulla. The spasmodic action of the laryngeal muscles on attempted phonation with the production of the characteristic voice, but more or less perfect condition of the part on laryngoscopic examination, are essential points in making the diagnosis. The prognosis is unfavorable, and few cases are cured or much relieved. Prolonged rest of the voice and a general tonic course of treatment of the nervous system are indicated.

SCHPEPEGRELL.

V. EAR.

A Case of Deafness with Loss of Equilibrium and Pulsating Exophthalmus Following Fracture of the Base of the Brain

PHOTIADÈS AND GABRIELIDES *Revue Int. de Rhinologie, etc.*,
December, 1898.

A man of twenty-six years, after a fall from which he lost consciousness, presented the above symptoms. There was violent hemorrhage from the left ear and from the nose, with loss of consciousness for three days. Suppuration of both ears developed which continued for six or seven months.

Three years later the patient still had loss of equilibrium and facial paralysis. The exophthalmus had diminished although the beats were still isochronous with the pulse, but deafness was complete. The authors believe that there was a fracture of the brain involving the facial nerve and the body of the sphenoid, with injury to the carotid in its passage across the cavernous sinus, and fracture in the petrous portion of the temporal in the neighborhood of the labyrinth. SCHEPPEGRILL.

Otological Items—*Wiener Klinische Rundschau*, February 19, 1899.

MAX KOLLER, Chief Inspector—Annual Report of the Royal Central Institute for Deaf and Dumb at Munich, 1897-1898.

The hospital at Munich lays down the following as its plan in regard to the treatment of partial ability to hear:

1. Basing our opinion on the reports of scientific authorities and our own experience, we do not believe that the activity of badly functioning and defective ears can be improved by so-called auditory gymnastics in the same way as nerves and muscles in like condition can be improved by massage and methodical exercise.
2. We do not attempt to improve the hearing of the pupils by physical methods, but rather, in a mental way, we encourage them to gather up their scattered recollections of speech and make use of their partial power of hearing to increase their desire for talking.
3. On this theory, we have abandoned all musical tones (whistles, harmonicas, etc.) and make use only of spoken language, in the ordinary tone and force, spoken into the better ear of the patient. We do not neglect mouth reading, but combine it with hearing.
4. We do not, therefore, make use of auditory exercises, but of instruction in the formation of words and language, utilizing the pupil's ability to read the mouth.
5. In these classes only those pupils take part who are able to perceive the notes between b^1 to g^2 and that when given with moderate intensity.

Passow has visited the institutions for the deaf and dumb in Baden and discovered a large number of children suffering from diseases of the ear, nose and throat which demanded treatment. He has therefore recommended a yearly examination of the children in this respect. VITTM.

Acute Catarrh of the Middle Ear—E. B. GLEASON—*Medical Bulletin*, April, 1899.

Acute middle ear catarrh is the result of a cold, and constitutional treatment for cold should be given. Calomel in small doses. Drop doses of aconite every hour for eight or ten hours. Morphine and atropine combined is excellent. Leeches about the ear are recommended. Of all measures for the relief of otalgia heat is the most speedy and valuable. The patient should lie on a hot-water bag, a hot brick, or bag of salt. A liberal use of ten per cent cocaine in lanolin should be applied locally for several days. A four per cent solution of cocaine on a pledget of cotton applied to the posterior portion of the nasal mucous membrane acts magically in relieving pain. It acts also in relieving the congestion and closure of the Eustachian tube. Gently inflating the tube with air, or, better still, chloroform vapor, restores the equilibrium and permits drainage from the middle ear. This treatment in uncomplicated cases should restore the ear to normal in two weeks.

JEFFERS.

Cerebellar Abscess of Otitic Origin—Autopsy—A. D. MCCONACHIE—*Jour. Amer. Med. Assn.*, April 8, 1899.

Otorrhea, to which class nearly 20 per cent of all ear cases belong, is like a pocketful of dynamite—a standing menace to life. Increased knowledge of the casual relation of naso-pharyngeal diseases contributes to the more successful treatment, and the removal of obstruction to respiration, and the proper ventilation of the tympanic cavity often result in a cure. Conservative measures should be tried before resorting to the radical tympano-mastoid operation, but when indicated this operation should be done promptly. With the best medical and surgical treatment, failure often results, as the writer shows by a case from the practice of C. W. Hartwig:

A boy of twelve years had suppuration of the right ear three years. The usual measures of treatment failed to arrest the discharge permanently. About a year ago vomiting, nausea, vertigo and coma followed a cessation of the discharge. A copious amount of pus was then suddenly discharged from the ear, and in twenty-four hours the boy was up. He continued well until the latter part of last January, when he complained of pain over the right side of his head. Ordinary antiphtogistic measures failed to relieve, and when seen by the writer, on February 2d, the pain and irritability were marked. The discharge was slight, the posterior segment of the drumhead was whitish and sodden, the canal was slightly swollen and reddened on the anterior inferior surface. There was no tenderness or redness over the mastoid. An ice pack was applied over the mastoid and sedatives and aconite were given. On the following day an operation revealed a small antrum from which a cholesteatoma was removed. The tympanum was curetted and free drainage was established, but the boy remained

apathetic and lost weight and strength. On the ninth day after the operation he appeared much improved, but on the tenth day he became semiconscious and restless, with retraction of the head. The pupils were dilated and the eyeground was normal. He died before an operation could be done. The autopsy disclosed a small area of necrotic meninges at the outer border of the cerebellar lobe and a pus cavity in the right lobe. The avenue of extension was through the postero-internal tympanic wall, anterior to and above the lateral sinus. The abscess capsule showed evidence of prior inflammation.

DEWILDER.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Some Thoughts on Diphtheria—I. N. LOVE *Med. Rev.*, Vol. xxxix, No. 19, May 13, 1899.

A practical and sagacious article. Love extols antitoxin and finds the strongest evidence he has personally secured in its favor in his cases of tracheal diphtheria, since this is the purest form of diphtheria, being an unmixed infection; the streptococci and staphylococci entering but little into the problem. Under antitoxin he has been able to save more than seventy-five per cent of such cases. He is sure, nevertheless, that our statistics, as they accumulate, will be much more favorable to antitoxin than they should be, and that in infectious diseases in particular we should give close attention to elimination, the secretions and excretions. He holds that there is no better eliminative agents than the benzoate of soda and the bichloride of mercury, and advises the local use of hydrozone and diluted listerine or some similar preparation. While it is the physician's duty to manage every case of sore throat as a possible diphtheria, it is not to be called diphtheria unless all the evidence justifies it. The fact is recalled that the bacteriologic records prove that a large number of healthy mouths and throats contain the Klebs-Löffler bacillus at any or all times, and that it is easy to make a diagnosis of diphtheria in a simple case of sore throat. At least ninety per cent of all the cases of sore throat, clinically diagnosed formerly as follicular tonsillitis, pharyngitis, etc., are now reported as diphtheria. Love also maintains that while antitoxin is practically harmless if used simply as a preventive, it is right to insist that practitioners shall not permit their patients to infer that, because they have used the antitoxin in a particular case of sore throat, they have necessarily given evidence of special skill and should receive credit for curing a case of diphtheria any more than they would be accredited with curing small-pox by having vaccinated their patient."

EAION.

Diphtheria Bacilli in the Urine—CAPTAIN FREDERICK SMITH, Royal Army Medical Corps—*Lancet*, November 19, 1898.

A guinea-pig, which had been some days before injected with live broth culture of diphtheria bacilli, was noticed to be passing hemorrhagic urine, and the idea at once suggested itself: If blood,

why not bacilli? The animal was killed and opened aseptically, and the bladder was exposed. The viscus was touched with a heated glass rod, and pierced at the sterilized spot by a glass pipette. Bloody urine thus obtained in the pipette was run over the surface of coagulated serum in a Petri dish. After incubation, a copious growth of typical Klebs-Löffler bacilli was the result.

A second guinea-pig was injected with a living culture. The animal was killed five hours later, and the urine was obtained aseptically in the manner above detailed. The urine was normal in appearance, but a plentiful growth of diphtheria bacilli on serum was obtained.

The result in the case of the second guinea-pig is somewhat surprising considering the short time which elapsed between injection and death. These facts go to prove that, in the guinea-pig, at any rate, bacilli in the blood-stream are some of them eliminated alive through the kidneys. It does not follow, of course, that diphtheria bacilli are passed alive through the kidney of a human being suffering from diphtherial disease. For all that, the results obtained suggest that, at least, in hemorrhagic diphtheria, bacilli will be found in the urine. It may further be anticipated that in all cases in which the bacillus (whether in small or large numbers) escapes into the blood-stream it will be present in the urine. It may be predicted even that, in order to prove the presence of the bacillus in the blood, search for it will be made in the urine in future. The practical bearing of this question is important from the public health point of view. If the urine of diphtheria patients is liable to contain the bacillus, the urine and feces (for the solid excreta are almost invariably mixed with more or less urine) will have to be disinfected just as rigorously as those of patients suffering from enteric fever. Those hygienists who have so strenuously maintained that there is a connection between general insanitation, middens, etc., and diphtheria will have a new fact to strengthen their argument.

STCLAIR THOMSON.

Pseudo-Diphtheritic Affections — Ex.—*Presse Méd.*, Jan. 14, 1899.

Several articles have appeared recently in our foreign exchanges describing affections of the throat with formation of false membranes, in which the only micro-organism found were Friedländer's or Vincent's bacilli. The characteristics of the former are the benignity of the affection and its persistence, six to seven months the average, with only slight general disturbance at the onset. The membrane is confined to the tonsils usually and resembles follicular tonsillitis in many respects. In the acute form, recovery is complete in five to seven days.

Nicolle and Herbert report ten cases of their own observation and nine in literature, of which fifteen were of the chronic form. Out of 2,500 examinations, they found the Friedländer bacillus in only fifteen cases. Vincent observed sixty cases on record in which the throat was affected with the formation of false mem-

branes on an ulcerative surface, dysphagia, adenitis and fever, suggesting true diphtheria, but investigation disclosed spindle-shaped bacilli in the membranes in immense quantities, usually alone, occasionally associated with the staphylococcus. It has been found associated with other microbes, and even with the diphtheria bacillus in a few very rare cases. SCHLIEFFGRILL.

The Results of the Practice of Intubation in the Infantile Clinic

—HENRI SANIERES—*The. de Toulouse*, 1898.

The author claims that in spite of some of the objections against intubation it has many advantages. SCHLIEFFGRILL.

After Intubation EDITORIAL — *Internat. Jour. Surg.*, Vol. XII, No. 5, May, 1899.

Some practical hints as to the care of the child patient during the first twenty-four hours after intubation, which is usually a period of restlessness. Small doses of morphine, from $\frac{1}{16}$ to $\frac{1}{8}$ of a grain, given a few hours after the operation and repeated in four hours if necessary, quiets the patient, induces sleep, restores vitality and prevents passing the night tossing on the bed, and thus inducing exhaustion.

Another condition to be met is thirst, and since all medication and alimentation is per rectum, the author has found that the milder types of thirst are sometimes relieved temporarily by directing a spray of sterilized water frequently over the lips and tongue. But he finds the great remedy to be the rectal injection of a saline solution, using a fountain syringe, holding the child up by the legs and giving him all he will take, the same as in cholera infantum and other bowel troubles. The procedure is harmless. EATON.

Remarks on Exophthalmic Goitre—J. H. CLAIBORNE. *Pa. Med. Semi-Monthly*, Jan. 13, 1899.

A review of the symptoms, etiology and treatment of Basedow's disease. The author concludes that the cause and pathology are not definitely known, and that the treatment should be largely symptomatic. SCHLIEFFGRILL.

A New Stain for the Bacillus Tuberculosis —MARION DORSETT—*N. Y. Med. Jour.*, Feb. 4, 1899.

In view of the fact that Sudan III has been found a useful stain for fat in histologic and pathologic work, the author has applied it to the tubercular bacilli with excellent results, as demonstrated by the excellent cuts with which the article is illustrated. The technique is carefully described. SCHLIEFFGRILL.

A Plea for the Early Diagnosis of Consumption—L. F. HIGH—*Charlotte Med. Jour.*, February, 1899.

The title explains the object and scope of the article.

SCHLIEFFGRILL.

Another Case of Bronchitis and Pneumonia Following the Inhalation of a Foreign Body—E. C. COON—*N. Y. Med. Jour.*, Feb. 25, 1899.

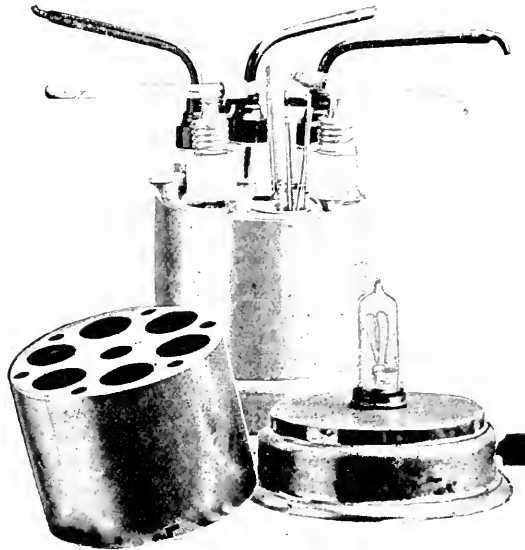
The symptoms of the patient indicated right central pneumonia. Five days after the incipency of the disease, a quantity of mucus was expectorated, in which was found the foreign body, a huckleberry. Eleven days before the patient had eaten huckleberries, but had no recollection of inhaling one, nor had he experienced any disagreeable symptoms at the time. After the expulsion of the foreign body the symptoms disappeared rapidly.

SCHEPPEGRELL.

VII. INSTRUMENTS AND THERAPY.

Warm Sprays and a New Spray Warmer—H. B. BRYSON—*Homoe. Eye, Ear and Throat Jour.*, January, 1899.

The author advocates the use of warm sprays in the treatment of the mucous membrane of the respiratory tract, because they are better solvents, are more readily absorbable, and more agreeable.



He has devised a spray warmer, heated by an incandescent electric lamp, to be attached to house lighting current.

The apparatus is provided with six holes for spray tubes. Provision is also made for warming laryngeal mirrors and aural specula.

GOLDSTEIN.

The X-Rays in the Diagnosis of Tuberculosis—J. RUDIS-JOHN-SKY—*N. Y. Med. Jour.*, Feb. 18, 1899.

A carefully prepared article, well illustrated with original cuts, which shows the importance of the X-rays as a diagnostic medium in tubercular affections of the lungs. SCHIEPPEGRIFF.

Compressed Air Engine Masseur—*Internat. Jour. Surg.*, Vol. xii, No. 5, May, 1899.

This instrument is a small engine 6½ inches high, designed to be worked by a hand-bulb, or connected with a cut-out to a compressed air tank, and used for massage of the tympanum. Acutis shown. EATON.

Pseudo-Membranous Croup Treatment H. P. FAHRNEY—*Amer. Med. Rev.*, Vol. vii, No. 4, April, 1899.

While disclaiming any desire to "laud any new thing," the author of this article, who does believe in the uniform use of antitoxin and calomel, gives cases which were apparently saved by the use of "Brown Iodide of Lime Nichols," in spite of the unsuccessful use of the aforesaid remedies. The dose is at first a one-third grain tablet every ten or twenty minutes, dissolved in hot water. He does not urge its use as a specific nor advocate its use in the diphtheritic form of laryngitis, without antitoxin.

The remedy is not official. [This "brown iodide of lime" is probably an impure calcium iodate, $\text{Ca} \cdot 10\frac{1}{2} \text{OH}_2\text{O}$, made by the action of an aqueous solution of chlorinated lime upon an alcoholic solution of iodine. In its pure form it is decolorized. *Ed.*]

EATON.

Modern Views of the Nature and Treatment of Pulmonary Tuberculosis—H. B. WEAVER—*Charlotte Med. Jour.*, February, 1899.

The author uses as a text the statement already made by Koch in 1882, viz., that from 30 to 50 per cent of cases of tuberculosis make spontaneous cures according to nature's process; that tuberculosis is different from other microbial affections in that it is not self-limited or self-protective; that it is distinguished from the majority of other affections in that we do not find leucocytosis attending it.

The author reviews the result of the treatment of pulmonary tuberculosis by the watery extract of tubercle bacilli of Von Ruck, and the anti-tubercle serum of Paquin. SCHIEPPEGRIFF.

The Treatment of Laryngeal Tuberculosis—STURMANN—*Wiener Klin. Rundschau*, April 30, 1899.

At a meeting of the Congress of Internal Medicine, held at Carlsbad on April 14, Sturmman read a paper on the above subject. The author takes the ground that inasmuch as laryngeal

tuberculosis is rarely a primary affection, and even when primary does not long limit itself to the larynx alone, we should not hasten to operative measures. Indeed he thinks that the latter often lead to extension and generalization of the disease. His plan would be to pay more attention to hygiene, diet and prophylaxis. Inasmuch as a simple catarrhal condition generally precedes the tubercular affection, we should strive to keep the sputum as fluid as possible so that it may readily be expectorated. Great attention should be paid to nutrition, especially where dysphagia is present. Locally the treatment should be similar to that adopted by surgeons in joint affections. Rest, ice bags, and water compresses in connection with mild antiseptic local treatment. The best antiseptic and sedative remedy is menthol. Operative measures and strong irritants are only rarely useful, and then only when the patient is strong and with very slight involvement of the lungs.

In discussing the above paper, Schmidt, of Frankfort, took a very different view. Prophylaxis is rarely possible, as patients who apply for relief are generally well advanced in the disease. The prognosis is not so bad as Sturmman represents, for in Falkenstein 37 per cent were cured, and among them many advanced cases. Surgical treatment is distinctly to be recommended.

VITTUM.

Treatment of Tuberculous Laryngitis by Laryngeal Insufflations—LEDUC—*Revue Hebdomadaire de Laryngologie, etc.*, Jan. 7, 1899.

The insufflations are made by means of a glass tube, about 6 millimeters in the interior diameter and 20 to 25 centimeters in length, so bent that when the patient makes a sudden inspiration the powder which is placed within the tube is projected over the diseased area. The only preparation which the author has found of service is the di-iodoform mixture, of which four to eight insufflations are made daily. Other preparations did not give the same results.

In all cases in which this treatment was applied there was rapid amelioration. Twenty-five cases of laryngitis were cured.

SCHEPPEGRELL.

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No. 2.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

THREE CASES OF SPONTANEOUS HEMORRHAGE FROM THE SEPTUM.*

BY MARCEL NATIER, M.D., PARIS.

There are various kinds of nasal hemorrhages which are not usually considered of great importance, as the flow is generally slight and tends to arrest itself. In most of these cases the patient does not consult a physician, but employs various domestic remedies, some of them dangerous, that are popularly supposed to be valuable to control the flow. When the patient seeks a physician it is because he has become uneasy from the excessive loss of blood, through recurrence or its continuousness, with the resulting serious effect upon the system. For it is not impossible that such hemorrhages should imperil the life of the patient. My present intention is not to discuss nasal hemorrhages in their entirety, but to cite three cases from my practice, comparing them with others of a similar character, which I have collected. I have purposely chosen cases that were affected with spontaneous nosebleed, all having experienced the first attack at a remote period. By a direct examination of the cavities I was enabled, each time, to convince myself that the exclusive origin was upon the septum, the lesions being well defined. Treatment of these lesions arrested the flow entirely.

Observation I. Hemorrhage was situated on the left side, persisting for seventeen days, caused by a rupture of an artery. The account of this case has been furnished me by Dr. Simon, who called me in consultation. At my request he has written the details which I copy here verbatim:

* Paper read by title at the fourth annual meeting of the Western Ophthalmologic and Oto-Laryngologic Association, New Orleans, February 10, 1899.

"The patient which we saw had been treated by me four years previously for nosebleed which proved stubborn to anodyne treatment. I succeeded in arresting the flow by tamponing both cavities with cotton saturated with warm alcoholized water. I found that this patient, commencing at about twenty-five, had been subject to severe hematemesis which lasted for a long time, and reduced him almost to a state of anemia. Investigation proved that he was addicted to drink, his heart was irregular, his liver very large, extending to below the false ribs, the width of three fingers. Knowing him to be unsteady, I prescribed a very severe regimen. In my frequent attentions to other members of his family I observed that he followed my advice very minutely. From time to time he had slight hemorrhages for which he did not call me. Three years ago his hemorrhages started anew, and with great loss of blood. I was absent from Paris when the attacks first returned, and the physician attending prescribed an antipyrine solution to the nostrils and gave him ergot internally. Upon my return I again resorted to the hot water and tampons, but obtaining no results I decided to call you and by your use of the galvano-cautery you conquered the hemorrhage. Since then there has been no recurrence. This was the result—with the shrinking of the deep lesions, hypertrophy of the liver set in. Some albumen and sugar appeared in the urine and a bulky carbuncle protruded from the nape of the neck. This was operated upon, but there followed ascites, cachexia and edema. He was twice tapped. Then came an overpowering hematemesis, and coma, and death resulted at the beginning of the year. He was sixty-six years old."

To this memoranda I will add these remarks. It was during the last days of April that I saw the patient. In considering my summons to attend this case my impression was that the trouble was due to varicose veins on the septum, and I was careful to take with me an accumulator and galvano-cautery to use if indicated. My colleague explained that the hemorrhage had persisted for seventeen days, that he had tamponed without success, and suspected a double origin, as the blood would cease for a time when one side was plugged, only to reappear on the other when the plug was removed. He considered the patient's condition most dangerous. I found him propped up in bed, pale and hardly daring to stir. He was afraid to leave his bed for a better light, and I proceeded to remove the bandages and plugs there. He declared he would bleed again when I removed the plug from the right side, but when I got it out no blood came. I then proceeded with my rhinoscopic examination with mirror, speculum, etc. Twisting some cotton on a probe I pressed it against the mucous membrane, and convinced myself that the blood

must have originated solely in the left cavity. Here I proceeded, with exquisite care, drawing out one plug after another. The last one was in deeper than the middle of the cavity, and as I was removing the plugs with the pincers I observed a drop of blood coming from the middle of the septum. My diagnosis was now made. I discovered a rupture in a branch of the sphenopalatine, and this as the cause of the hemorrhages. I felt that I could cure him, and exclaimed accordingly, but my patient was far from sharing my confidence, seeing that the flow was renewed. The blood was gushing forth, and losing no time, I applied my galvano-cautery, which had been heated to a dark red glow, three or four times, without daring to wait for cocaine anesthesia. The flow ceased immediately. The patient was not convinced for he remarked, "Yes, I know, it stops that way sometimes, but as soon as I blow my nose it starts again." Then I requested him to blow his nose, and he did it gently, then violently, but without any recurrence. As a precaution I again made several applications of the cautery, and not without pleasure did I assure the patient that he was cured. His face lit up, he exhibited great pleasure, and illustrating his satisfaction by striking me on the stomach with the back of his hand, he exclaimed, "You are a quack!" (fool.) These were his last words. No more hemorrhages occurred, and the patient died not till three years later.

Observation II. Hemorrhage of fifteen years duration, from the left side only, and caused by varicose veins of the septum. B., twenty-eight years, a student in Paris. Hereditary history: Nothing special from either parent. Mother dead. Sisters and brothers not peculiar in any way. Personal history shows no tendency to hemophilia. Headaches in infancy, which later on disappeared. First epistaxis occurred between twelve and thirteen years. Brought on by headaches, which they relieved, consequently when he had a severe headache he would blow his nose in order to bring on the bleeding for its attendant relief. The flow in such cases was always less than when it occurred spontaneously. The latter were so severe that the patient would lose consciousness, and they occurred at least once a month. As a rule the bleedings returned once in two weeks, but often they had only a week or four days intervening. They appeared under varying conditions, and sometimes they seemed to have as their excitant a physical or mental state. For example, they came after a run, bodily fatigue, mental strain or excitement. The bleeding continued thus until he was sixteen or seventeen, and then grew less frequent. At twenty-two they had diminished still more. This continued until he was about twenty-six, when there was a slight increase. In truth, they returned

every week, or even every few days, and sometimes several times a day. At the Conseil de Revision, the military examining board which admits recruits to the army, he related the history of his case, and it was pronounced a disease of the heart. He was very weak and was forbidden any violent exercise, but when he indulged in it he was none the worse. He became convinced that red wine caused the flow, and he abstained from this beverage until he came under my care. When I took charge he was suffering great depression, was melancholic, had weak eyes, and could not endure the glare of the sun or even the glistening snow. At one time he submitted to Kneipp's treatment, which improved him during the eight succeeding months. His sight became stronger, and the hemorrhage less during this treatment. He also made use of the advice of a young English physician, who recommended sexual erections ("rappports"), which produced a decrease of the hemorrhage during a certain time. I accidentally became acquainted with his condition, being accustomed to dine with him. He had become accustomed to nose bleeds, which he felt nobody could cure, and only upon my assurance that I might cure him did he consent to an examination.

Rhinoscopic examination of the left side revealed varicosities on the septum which bled on the slightest touch. I applied the cautery but once, and since then there has been no recurrence. December 1, 1898, this patient related to me his subsequent experiences. He has continued his studies with interest, little by little, had laid aside his glasses and now no longer uses them: his headaches have entirely disappeared, and when they are present are very slight. His general condition has much improved.

Observation III. Hemorrhage of fourteen years duration from varices of the septum. Madame M., twenty-six years old. No profession.

Hereditary history: Father died at thirty-eight, probably from phthisis. Mother in good health, also a sister. No family history of hemophilia.

Personal history: During childhood had nosebleeds, but they attracted no attention. At twelve they appeared rather frequently, and at fifteen became more severe, almost daily. Indeed she lost great quantities when under the least mental or physical exertion. From the beginning she observed the flow as coming from the left cavity. First menstruation was between the ages of fifteen and sixteen years. At this time she was weak, anemic, and had frequent spells of dizziness. She was convinced that the nose bleed would cease when her periods became regular, so she did everything to bring this about.

But the hemorrhages only became more frequent, and even appeared during menstruation. She was told that marriage would cure her, so she married at twenty, but was disappointed, though not completely.

She became pregnant twice, and during the first pregnancy had no hemorrhage. During the second she had two or three attacks, but they were slight. Both children are living, healthy, and not subject to hemorrhages. Between the pregnancies the bleedings recurred, and after the second pregnancy they continued up to the time she came to me. During these years of suffering she consulted several physicians, but they only prescribed tonics, hamamelis Virginica, phosphate of lime, etc., and some of them examined the nares. Failing in this therapy she was advised to make a pilgrimage to Lourdes. This advice resulted in benefit, for it was then that she became pregnant the second time. People may draw their own conclusions concerning the pilgrimage. She had not grown thin, doubtless because she retained her appetite. Although intelligent, her memory was poor. Various physicians opined that she would not live very long, at different times, owing to her very much reduced health. This was the condition of affairs when she consulted me. I found her a woman of medium height, very pale, and apparently greatly depressed. Rhinoscopic examination showed the right nasal cavity normal, but on the septum, in the left side, there were scabs, formed from small clots, on a very red surface. All around were well-defined vascular arborizations formed by numerous varicose veins. I separated the scabs from the septum with a probe, wrapped with cotton, which caused the blood to flow immediately. I applied an anesthetic of a five per cent solution of cocaine, and afterwards canterized several times, heating the point to a red glow. As a definite treatment I ordered the patient to inhale *une pommade au tanin* several times daily. November 26, 1898, M. called to see me. She said that since my treatment, which was now longer than three years, she had not experienced the slightest hemorrhage, but it seemed they were proceeding to reappear, and each day she was surprised not to have them return. She had not used the "pommade," not having found it necessary. Her menstruation, always slight, had not changed in character, except that they were perfectly regular, whereas formerly they were not. Her condition had greatly improved. She began to improve noticeably within two weeks after the treatment, had grown stouter at first, but later lost weight, but there was no return of the flow. Her memory was slightly better apparently. Endurance was not in evi-

dence as she had not worked. Examination of the left nares revealed no varices, but in their place was cicatricial tissue.

Remarks. From comparison of the three cases we arrive at the following deductions: Our cases consisted of two men and one woman, but we must not enter into statistics. In our cases the hemorrhage was spontaneous in all, and could be traced to the nasal cavities, and I would specially emphasize the importance of the mirror and speculum to all physicians. It was indispensable to the first patient.

The other two cases presented varicose veins, and ulcerations so frequently described, the seat of which is always on a level with the cartilaginous septum near the middle part. In the first case there existed a rupture of the internal branch of the spheno-palatine situated very much higher, and further back. Without a direct examination it would have been impossible for me to have given a positive diagnosis, and the exact location of the lesion which was on a level with the bony part of the septum and too deeply set to be seen with the naked eye. The hemorrhages from varicose veins is injurious to the health, but that from a ruptured artery may immediately endanger life if not properly treated. The failure to arrest the flow in Case No. 1 was due to two causes: the location and the nature. Those ordinary hemorrhages which are produced from a level with the cartilaginous septum are easily checked by restriction or tamponing when they do not cease spontaneously. This was not the case with the first patient. By not knowing the exact seat of the flow the plugging was imperfectly done; direct restriction could have been of no avail had the plugging not been done far enough back into the cavity. The arterial flow washed away the clots, and I do not exaggerate when I affirm that had affairs continued death would soon have ensued.

The young man representing Case II, actively engaged in brain work, was in a veritable state of neurasthenia, due to the hemorrhages. Even his sight was affected. An objection raised by some would be that frequent hemorrhages could produce neurasthenic depression. This has some value, but circumstances have remained the same with this patient, and his general condition has much improved under my care, and I believe my treatment to have been beneficial. These same remarks are applicable to the young woman. Should nosebleed be treated? There can be but one answer, "Yes!" But, every one will not agree to this, and in our day there are physicians who hesitate. They establish classifications of those which are, or are not, to be treated. The vicarious hemorrhages of former times still have those who believe in not treating them; but

these are becoming fewer and fewer, though not yet entirely extinct. Some think that nose bleeds due to such organs as the liver, heart, kidneys, menstruation, etc., ought not to be treated. Others declare that to deprive a patient of such an emunctory is to expose him to arterial sclerosis, or to a serious complication of diseases, especially in the vicinity of the encephalon. These convinced, but over-conservative practitioners, we would ask to make distinctions, and not consider venous and arterial hemorrhages as the same. Though the first might permit of a certain amount of tamponizing such a procedure would be death to the second. Thus, in considering the cases here described, it is inconceivable how any one could advise letting my first patient go untreated for so long a time. This case also serves to interest us as proving the exaggerated scruples of those physicians who fear an arterial sclerosis. Not only did the arrest have no ill effects upon the encephalon, but the man was enabled to live three years longer, and if it is true that his death occurred in coma I don't think it had anything to do with the cauterization which was done at an opportune time. These are the facts, and we can draw our own conclusions.

When we have located the source of the bleeding our action should always be to promptly check it. The means may be varied. Having no other means we can bathe the parts in hot water, by simple astringent, or by tamponing. The flow being unilateral it suffices to tampon the side from which it comes. It is rare that it is necessary to plug both the anterior and posterior nares. If the blood comes from the anterior part of the cavity it is necessary to apply the plugs at that level, and to notice if the flow stops. But, this is not radical treatment. A permanent cure is to be effected only when we have removed the cause. Our endeavor is to transform the ulcerated and friable mucous membrane, at the level of which the blood flows into cicatricial tissue. This can be accomplished with either nitrate of silver, chromic acid or the galvano-cautery. From conviction I always employ the latter. I am justified in this, since in all my cases I met with success. In the same manner I have been successful with a great number of other patients. The instruments are simple, and one can have them constantly available for either office or outdoor practice. If the battery is not available one could use the chromic acid or silver. But, in my opinion, the actual cautery, as represented in a probe, heated red hot over a spirit lamp, is preferable.

PREVENTION OF NASAL CATARRH.

BY FREDERICK C. ROGERS, M.D.,

Professor of Rhinology and Laryngology, Milwaukee Medical College; Laryngologist to Trinity Hospital and Milwaukee County Hospital, Milwaukee, Wis.

In the prevention of any disease we must, of course, look to the conditions near and remote which are the cause of it and eliminate them as far as possible. It is a recognized fact that, in the majority of cases, the catarrhal process begins early in life and matures as age advances. Hence, whatever prophylactic measures are undertaken, they should, to accomplish the greatest good, be begun and followed out in childhood.

The nose and its accessory sinuses constitute a very extensive and intricate apparatus. It has very important and extremely delicate functions to fulfil, and upon the proper fulfilment of those functions depends to a large degree our physical health. Any considerable change in its normal anatomical relations obviously means impaired function, and impaired function means altered secretion.

Children, as a rule, begin life with healthy noses, and the change from a healthy to a chronic catarrhal condition can generally be avoided by the use of proper clothing, the bath, attention to the digestive apparatus, exercise and fresh air, and last, but in no wise least, by such local treatment of the nose and throat as may be necessary to insure freedom of nasal respiration and drainage. Exposure is inevitable, therefore we must prepare for it by increasing our resisting capacity by accustoming our bodies to sudden changes. Too much clothing is worse than too little. Our aim should be to cover the body with light woolen underwear and outer garments sufficient to keep the cold out, but not enough to be burdensome or to induce even slight perspiration. Wool is by far the most hygienic material for undergarments and should be worn next to the skin in varying weights all the year. It is light and porous, and permits of thorough circulation of air, which insures dryness and gradual cooling of the body when freely perspiring from exertion. Woolen stockings and heavy-soled shoes should be worn during the cold and inclement weather of spring, fall and winter, and the use of rubbers and overshoes abandoned.

People think to prevent taking cold by bundling themselves up, reasoning that by keeping the cold air out they will escape having a

cold in the head. There is no more pernicious habit than that of wrapping the throat in furs, large collars, boas, etc., for by their use the resistance of that part of the body which is bound to be exposed at times is lessened. The part becomes weakened through unnatural heat and the result is chronic catarrh. The daily use of the sponge bath or cold plunge is of the greatest value in preventing the development of nasal catarrh as well as in its treatment. It is one of the greatest hardeners of the system that we possess.

Careful attention in the matter of diet and in the regulation of the bowels should be strictly adhered to. These matters are left all too often to the discretion of the child. Any improper action of the digestive tract is sure to intensify an already existing pharyngeal or nasal trouble.

Children should be kept out of doors as much as possible, rainy or windy days, as a rule, offering no objection. They should be encouraged to romp and run, and, as they grow older, to engage in all manly sports, for by these measures do they unconsciously help to fortify themselves against future diseases.

Children of school age are usually housed six hours or more of the day in overheated, poorly-ventilated school rooms, breathing the already poisoned atmosphere over and over. I have lately been interested in making observations as to the temperature and ventilation of some of our school rooms. It is not at all uncommon to find from forty to sixty small children in a poorly-ventilated room, the temperature of which ranges from 70 upward. The children have flushed faces, are inattentive and restless, and no wonder. It is a common complaint among mothers, that as soon as their children begin going to school they have frequent and severe colds. They will continue to have them until we have teachers who understand and appreciate that the temperature and proper ventilation of the school room are of vital importance, and mothers who will dress their children for comfort and health rather than for style.

What is true of the temperature of the school room applies as well to many of our houses. Furnace-heated air, almost devoid of moisture, is respired again and again. It is this atmospheric dryness that so over-works the glands in the throat as to cause them to undergo hypertrophy.

Purulent rhinitis, so common and persistent among children, should receive continuous home treatment. The value of such treatment can hardly be overestimated. A soft rubber ear syringe, with a warm alkaline and antiseptic solution, used two or three times a day, each time thoroughly cleaning the nose. The frequent use of the

handkerchief (which should always be encouraged in children) will do away with the germ-laden, muco-purulent discharge, and allow nature to repair and strengthen the diseased membrane. Frequent office-treatments are necessary to insure perfect cleanliness and also for the purpose of stimulating the tissues to renewed activity by the use of local applications. In case there is no appreciable disease of the nose or throat, I think it is wise to use a cleansing spray every day or two simply as a prophylactic measure.

I believe mouth-breathing is rarely, if ever, a habit in the first instance, but rather a necessity. Every case of mouth-breathing should be examined to determine the presence or absence of nasal stenosis or adenoid vegetations in the vault of the pharynx, both of which require attention. If the septum is deflected so as to cause considerable narrowing of either passage it should be corrected at once. Nasal stenosis will ultimately cause the over-worked tonsils to become hypertrophied and very prone to acute follicular disease. Besides retro-pharyngeal and circumtonsillar abscesses, which are frequently caused by entrance of the streptococcus through diseased tonsillar crypts, that common enemy of mankind, the tubercle bacillus, invades the cervical lymphatics through these portals, causing enlargement and paving the way for a general tuberculosis. All enlarged tonsils should receive careful treatment, either by extirpation or by destruction of the diseased crypts, which will render them less liable to inflammation.

ASTHMA AS A REFLEX MANIFESTATION FROM ABSCESS OF THE ANTRUM.*

BY CHARLES W. RICHARDSON, WASHINGTON, D.C.

Professor of Laryngology and Otology, Columbian University.

All rhinologists have at times interesting cases which demonstrate the peculiar and devious manner in which pathological changes within the nasal chambers and neighboring accessory cavities work out reflex disturbances in the respiratory tract and other organs. These disturbances are at times so remote, the method of their workings so difficult to trace out, and their correlation so beyond comprehension, that one is unable to decide whether the relief of the accessory disturbance is an effect or an incident in the treatment. In the past three years I have had under my observation two cases of antral abscess attended by marked evidence of asthma, in both of which cases the asthma seemed to be excited in a reflex manner through the abscesses of the antrum; or, in which the asthma was relieved through the evacuation of the pus within the antral cavity. I have had the index of titles of the library of the Surgeon-General's office carefully searched for papers bearing upon this subject, but could find no such disturbance mentioned. As far as possible, I have had papers and treatises on antral abscess examined, for the same purpose, but to no avail. I therefore present these cases to you as describing a never before mentioned, so far as my knowledge goes, reflex cause of bronchial asthma.

Case I. In May, 1896, I was consulted by a young woman who gave the following history: About thirteen years ago she contracted a bad cold which was attended with profuse discharge from the nose and excessive coughing. She consulted a physician in Chicago, where she was then residing, but gained no relief. During the following spring the cough abated somewhat and the discharge from the nose lessened considerably. During the summer she noticed that the discharge ceased in the left nasal cavity but still persisted in the right cavity, and, at this time, her attention was called to an offensive odor which she occasionally detected. The odor became more intense and she described it as "something terrible." She stated that she used from ten to fifteen handkerchiefs daily. During the second winter all her symptoms became more intense, and to

* Read before the American Laryngological, Rhinological and Otological Society, at Cincinnati, Ohio, June 2, 1899.

those already described were added intense frontal headache and occasional paroxysms of asthma. During the succeeding three or four years the local symptoms remained the same but the asthma became more persistent, being present every night. About this time she began to lose flesh; and from the persistence of the purulent discharge, asthma and cough, began to dread the possibilities of tuberculous infection. During all this period she was under the care of various physicians, in Chicago and Washington. At the time she came under my observation, she presented the picture of a very ill woman. She was markedly emaciated, very weak, pulse 130, and with a temperature of 102°. For a month previous to consulting me, she had frequent slight chills. Her breathing was extremely labored, and sonorous rales could be heard when sitting close to her. The breathing was extremely difficult by day as well as at night. Examination of chest revealed sibilant, sonorous, and mucous rhals throughout the whole area of both lungs. Examination of nasal cavities showed the right antrum of highmore to be the seat of an abscess—probably the original condition that had brought about all the pathological changes. The nasal cavities were fairly free, the turbinates being only moderately enlarged and permitting free nasal respiration at all times. In the mouth on the right side I found only jagged remains of the first and second molars. These old snags were removed under nitrous oxide gas by Dr. Gustavus Brown. I made a free opening into antrum through the alveolus and evacuated the pus, some necrosed bone and granulation tissue. The breathing was immediately relieved and the patient had no recurrence of the asthma for a period of eight weeks. After four weeks of treatment the patient was discharged as cured. After a period of eight weeks from the opening of the abscess the patient returned to me with the statement that there had been a recurrence of the discharge from the nose and for two days severe paroxysms of asthma. The cavity was reopened and, after a week's treatment, allowed to close. The patient rapidly recovered her general well-being and continues perfectly well at present writing.

Case II. This patient was a man of thirty-four years of age, a printer by occupation; was brought to my office by Dr. P. S. Roy, to ascertain the possible relation of my local morbid condition with the unusually serious asthma with which the patient was afflicted. Dr. Roy stated that the patient had had asthma for a period of two years upon which he had exhausted his therapeutic knowledge without any benefit to the patient. During all this period the patient had a profuse, offensive nasal discharge. The poor fellow's appearance was deplorable and his exhaustion and extreme efforts to respire were pitiful to behold. I found all evidence of a left antral

abscess. There were several bad teeth on left side and I requested that the second bicuspid and first molar be extracted and that he should then return to me to have the abscess opened through the alveolus. This patient was also in a septic condition as demonstrated by frequent chills and high temperature. I narrated my previous case to Dr. Roy, of which he already had knowledge, and advised the treatment of the antrum, which was absolutely necessary, hoping also that it might demonstrate some casual relationship to the asthmatic condition. The patient was so exhausted by the trip to my office that it was a week before he was enabled to have the teeth extracted. The patient's breathing was so extremely embarrassed and his exhaustion so great, on the day upon which he presented himself for operation, that I dreaded almost to make the attempt at opening into the antrum. After perforating and washing out cavity, I removed him to an adjoining room and continued my work. In about fifteen minutes I returned to my patient and was almost dumbfounded at the marvelous change in his breathing and the evidences of relief depicted in his countenance. In response to my inquiry as to how he felt, he replied, "Bully." In a period of a month he was discharged cured, having had no recurrence of asthma since the few minutes after the evacuation of the antral cavity. Two months later, while bicycling, he reclined upon the grass and contracted a serious cold. This cold caused a recurrence of the antral abscess and the asthmatic paroxysms. Several weeks after this occurrence the patient presented himself again and I immediately reopened the abscess with attendance of immediate relief. This patient is still under my care. Since he returned to me in January of this year (1899) the patient has relaxed in treatment several times, each relaxation in treatment being attended with a reaccumulation of pus and attack of asthma. So long as the cavity is free from pus, so long is he free from asthma.

In the two cases above narrated it is to be noted that the complete relief of the asthma resulted from or was coincident with the evacuation of the antral cavity, and as long as these cavities remained free from accumulations of pus there was no recurrence of the paroxysms of asthma. It is also noteworthy that in the first case, although three years have elapsed since the cure of the antral abscess, there has been no deviation from the absolutely normal condition. There was not, nor has there been at any time during the treatment of these cases, while under my care, any remedy given to control the asthma. It is impossible to state whether the reflex disturbance issued from the pathological change and the accumulation of pus within the antral cavity, or from the nasal cavity, due to the irritation excited by the pus which ran from the antral cavity and bathed the tissues of the nasal chambers.

REPORT OF A CASE OF EMPYEMA OF THE FRONTAL SINUS, WITH ORBITAL ABSCESS—OPERATION AND CURE.

BY WM. A. MARTIN, M.D., SAN FRANCISCO.

Mr. B., first seen May 6th, 1898. At that time there was a slight swelling in the inner angle of the left orbit, the upper lid was heavy and did not lift properly, giving the eye a heavy look. The left nostril was obstructed by an immense hypertrophy of the middle turbinate. He stated that a polyp had been removed several months before. My first endeavor was to clear the nostril of the obstruction by snaring the enlarged turbinate. The orbital swelling would increase at times and then return to the original condition. I tried to probe the frontal sinus through the natural opening with a celluloid probe, and at times thought I had succeeded, as such probing would be followed by a flow of pus. This varying condition continued until in July, when the orbital trouble became so pronounced that I had him go to the hospital with the intention of opening the frontal sinus. The swelling in the orbit, however, became so prominent and there being fluctuation, on the advice of Dr. Morse, I decided first to let out the pus, and did so by an incision a little to the left of the middle of the orbit, immediately under the brow; at least a couple ounces of pus escaped. In passing a probe through the opening I seemed to enter a bony cavity with denuded bone at places; this same conclusion was reached by Drs. Morse, Weil and several other surgeons present at the operation. Three days later I decided to enter the frontal sinus, which I did by a modification of Czerney's operation (Golgovines), Dr. Morse, Drs. Weil, Stirewalt and the house internes being present. The sinus proved to be about the size of a hazelnut, was filled with pus and granulations, but there was a free passage into the nose. With a curette I had no difficulty in burrowing through into the other cavity, which evidently was either an independent abscess emanating from the ethmoidal sinus, or was a secondary abscess caused by the migration of infectious material through the orbital plate of the frontal bone.

I passed two drainage tubes through the outer opening into the frontal sinus and closed the external sinus opening. The condition improved at once and he was discharged from the hospital on the 24th of July. The discharge gradually decreased and I removed the tubes and used gauze drainage. About the 10th of August I

removed all drainage: it continued well for several days, but then the sinus filled up and I was obliged to let out the pus, which I did with a Graefe knife at the most prominent point over the sinus. I inserted a small drainage tube both at this point and in the outer opening, and by passing a probe, re-established a through and through drainage. I attended to the cleansing myself for several weeks, washing with boric acid solution and then injecting iodoform in suspension in alcohol. Mrs. B. soon learned to do the work nicely, so I intrusted the treatment to her hands. There was a steady improvement until about the end of September or beginning of October, when the discharge entirely ceased.

I cut out the middle turbinate by means of the Myles nippers, so as to leave free drainage from the sinus.

Spring Valley W. W. Building.

Frontal Sinusitis, with Several Illustrative Cases—WALKER

DOWNIE—*Glasgow Med. Journ.*, May, 1899.

The author in this paper briefly describes five cases of frontal sinus empyema which had been under his care. When performing the external operation, the author employs the following method: Either a vertical mesial incision is made, or where one sinus only is involved, an incision along the line of the eyebrow is preferred. The greater part of the anterior wall of the sinus is removed, the cavity is cleaned out and a free opening is insured into the nose by curetting in the anterior ethmoidal region. No drainage tube is passed into the nose, but the sinus is packed with cyanide gauze, the end of the gauze being brought out through a counter-opening made close to the inner canthus of the eye. The skin incision is closed throughout its whole length. The packing is left in position for from seven to fourteen days. In each of his cases the skin incision healed by first intention. Of the five cases reported by the author it is very satisfactory to note that all are reported as cured, there being an entire absence of discharge from the frontal sinus at the time of writing. In one, a small quantity of mucus passes occasionally into the pharynx, apparently from the posterior ethmoidal cells. In one of the cases a second operation upon the sinus was found necessary. In five out of six cases the author has found associated ethmoidal suppuration. The cases described in this paper were not complicated with antral empyema.

A. LOGAN TURNER.

BENIGN LARYNGEAL TUMORS.*

BY JOHN M. INGERSOLL, A.M., M.D., CLEVELAND, OHIO.

Lecturer on Rhinology, Laryngology and Otology in the Medical Department of Western Reserve University; Chief of the Nose, Throat and Ear Clinic, Lake Side Hospital; Consulting Laryngologist, St. Clair Hospital.

Papillomata of the larynx are not rare. They occur more frequently than all other kinds of tumors of the larynx combined. Fibromata are second in order of frequency, but are comparatively rare.

Papillomata may occur as a single warty, cauliflower-like tumor, or like warts on any other part of the body; there may be several of them located in different portions of the larynx, but a growth in the posterior part of the larynx should always suggest the possibility of syphilis or malignancy. They are usually situated in the anterior part of the larynx and more frequently develop on the anterior half of the vocal cord than on any other portion of the larynx. They may occur congenitally, and are then usually associated with hypertrophy of the faucial tonsils or Luschka's tonsil or both; they may also be developed by the laryngeal irritation caused by mouth-breathing in children with adenoids or enlarged faucial tonsils, and in such cases they usually disappear when the adenoids and tonsils are properly treated. Papillomata of the larynx in children are, however, comparatively rare.

The etiology is difficult to determine; laryngeal strain or excessive use of the voice in speaking or singing may cause them, but they frequently develop in persons who use their voice very moderately and a few cases have been reported in deaf-mutes.

The pathology consists of hypertrophic changes in the papilla with a proliferation of epithelial cells forming small round projections.

Fibroma of the larynx usually occurs as a single tumor, though the development of one on the edge of the vocal cord may cause a similar growth on the opposite cord.

Their etiology is uncertain. They are composed of a mass of dense connective tissue, scantily supplied with blood vessels, and usually present a rather round, smooth surface covered with mucous membrane.

*Read before the Cleveland Medical Society, May 26, 1899.

The symptoms caused by papillomata and fibromata are similar and consist of a sense of fullness or discomfort in the larynx: cough is frequently complained of. The interference with phonation is purely mechanical and is dependent upon the size and location of the growth and varies from slight hoarseness to complete aphonia. Spasm of the larynx sometimes occurs.

If the tumor is large, it will interfere with respiration, particularly upon exertion.

It is the intent of this paper to report three cases of laryngeal papillomata and three of fibromata, which it has been my good fortune to see and treat during the past year.

Case I. L. M., aged six, a well-nourished and active boy with a good family and personal history. Several months before consulting me, his mother noticed a slight hoarseness developing; this hoarseness gradually increased until he could only speak in a whisper. For more than a month he had been having difficulty in breathing and was unable to run and play on account of the impeded respiration. When asleep, his breathing was noisy and labored, making him very restless at night, and the repeated attacks of what his mother called croup were evidently due to spasm of the larynx.



Fig. 1.

Attacks of coughing were frequent.

A thorough examination showed the nose, naso-pharynx and pharynx to be normal.

The larynx was almost completely filled by a large, irregular, cauliflower-like tumor, covering the right vocal cord entirely and the anterior two-thirds of the left cord.

The diagnosis of papilloma was made from the macroscopic appearance of the tumor and intra-laryngeal operation advised. Under cocaine anesthesia a piece of the tumor was removed with Krause's double curette and examined microscopically and the diagnosis of papilloma confirmed.

Owing to the age of the child and his consequent lack of comprehension of how he could aid the operator by holding his head in the proper position and protruding his tongue as far as possible, the difficulties of the intra-laryngeal operation were greatly increased, but in several sittings I succeeded in removing most of the tumor.

All difficulty in respiration disappeared; the voice improved markedly, the cough ceased and the boy slept well, free from any attacks of laryngeal spasm.

At this time the mother returned to her home in the country, promising to bring the boy back soon, but the case has not been seen since.

(Plate I represents the condition of the larynx when first seen and after the last operation.)

Case II. M. F., aged thirty-two, a well-nourished and healthy man; history negative.

A slight hoarseness, which began five months previous, without any apparent cause, was the first indication that he had any laryngeal trouble. The hoarseness had steadily increased and was accompanied by a tickling sensation and cough; otherwise he felt perfectly well.

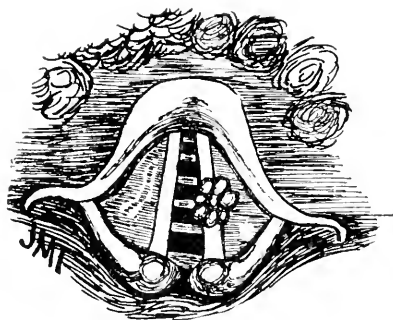


Fig. 2.

The whole respiratory tract, with the exception of the larynx, was normal. On the left vocal cord, at about its center, there was an irregularly round cauliflower-like tumor about 0.5 cm. in diameter.

The whole larynx was slightly inflamed.

The tumor was removed with the double curette and the base cauterized with chromic acid.

At the end of ten days the larynx appeared normal; the voice was clear and good and has remained so.

(Plate II shows the appearance of the larynx before the operation.)

Case III. C. D., male, aged forty-five. History negative; general health good. The patient is a smoker and drinks the stronger liquors moderately. He had been troubled by a gradually increasing hoarseness for two years, until his voice became very harsh and rough and it required considerable effort for him to speak above a whisper. His larynx felt irritated continually and frequently was quite sore; cough was a constant symptom.

The nose and naso-pharynx were normal.

The pharynx, epiglottis and larynx were all chronically inflamed and exceedingly sensitive.

On the anterior part of the left vocal cord there was an irregularly oval warty-like tumor, covering the anterior third of the

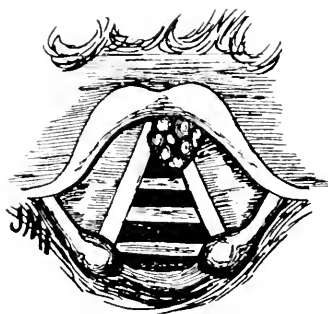


Fig. 3.

cord and extending over a small part of the right cord. A piece of the tumor was removed and the microscopical examination showed it to be papilloma.

In two sittings the tumor was all removed except a very small piece on the extreme anterior end of the left cord, and as all symptoms of irritation and cough had disappeared, the patient refused to have anything more done, although I assured him that it would probably recur if left in that condition.

Four months later the patient came to me again, as he was beginning to have a return of his former symptoms. A laryngeal examination showed that the papilloma was recurring. At present he refuses to have anything done, except local application (zinc chloride or alcohol), which give him considerable temporary relief.

(Plate III shows the condition in the larynx when first seen.)

Case IV. E. H., female, aged thirty-two, general history good. One and one-half years ago the patient first began to have occasional attacks of hoarseness which became more and more frequent and prolonged until the voice finally remained harsh all the time.

The upper respiratory tract was normal, the larynx was unusually small and the epiglottis was also very small and sharply curved from side to side, making a very narrow opening into the larynx.

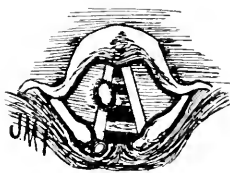


Fig. 4.

On the free edge of the right vocal cord, at almost its center, there was a small, round, smooth tumor, about 2.5 mm. in diameter.

The tumor was removed with the double curette and examined microscopically; it proved to be a fibroma.

Within a few days the voice was normal and has remained so ever since.

(Plate IV represents accurately the size of the larynx and the tumor.)

Case V. H. H., female, aged eighteen. History negative.

For eight months she had been troubled by a slowly increasing hoarseness.

There was a small spur on the nasal septum, but respiration was not at all impeded by it.

On the right vocal cord, at about its center, there was a firm, round tumor, 1.5 mm. in diameter; directly opposite, on the left cord, there was a thickened spot, surrounded by an inflamed area.

The tumor on the right cord was removed and proved microscopically to be a fibroma.

The thickening on the left cord was treated by local applications of zinc chloride and was rapidly disappearing, when the patient left the city.



Fig. 5.

Plate V shows the larynx before the operation.

Case IV. P. D., aged thirty-six, a healthy German contractor. Hoarseness and cough extending over a period of sixteen months were the symptoms of which he complained.

The upper respiratory tract was normal.

In the anterior part of the larynx there was an irregularly, oval, nodular tumor, about 1 cm. in diameter, covering the anterior part of both cords and projecting up above them about 1.5 cm.

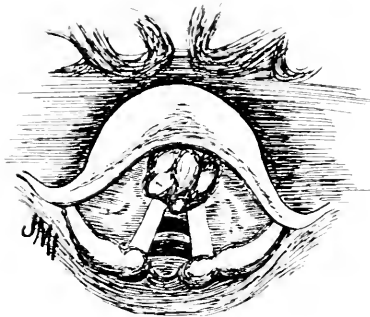


Fig. 6.

The macroscopical appearance of the tumor in the larynx suggested papilloma, but under the microscope it proved to be a dense fibroma.

The tumor was removed in four sittings and the point of its attachment, along the anterior fourth of the right vocal cord, was cauterized with chromic acid, and the larynx is now practically normal.

(Plate VI shows the appearance of the larynx in this case.)

There is nothing in the history of any one of the three cases of papillomata which gives us any clue as to the etiology; the possibility of smoking and drinking, as an etiological factor, suggested by Case III, is more than counterbalanced by Cases I and II, in which there was no such element; it is not wise to attempt to draw any conclusive deductions from so limited a number of cases.

The liability of papillomata to recur, unless thoroughly removed, is well illustrated in Case III.

In the three cases of fibromata there are also no conditions which can be reasonably considered as causes for their development.

In all of the cases the principal symptoms were hoarseness, caused by the tumors being so situated as to mechanically interfere with perfect apposition of the cords, and more or less cough, and the feeling of discomfort and irritation in the larynx.

In all such cases the treatment consists in thorough removal of the tumors, by intra-laryngeal operation, if possible, if not by an external operation.

50 Euclid Avenue.

A Laryngological Clinic—WM. L. BALLENGER, Chicago, Ill. —
Medical Standard, June, 1899.

Four cases are presented. The first is a case of fracture of the intraorbital arch through the infraorbital notch with anesthesia of that portion of the face supplied by the infraorbital nerve.

The second is a case of deflection of the septum nasi with spur. The spur was removed and the septum straightened in the usual manner. The author mentions the use of tampons saturated with tincture of benzoin compound and states that the benzoin prevents decomposition.

The third is that of a woman who had swallowed a pin, which was found sticking through the mucosa on the under side of the epiglottis. It was removed with the curved laryngeal forceps.

The fourth is a case of hereditary syphilis of the nose in a girl four months old. In conclusion the author sums up the essential facts concerning the course and the treatment of hereditary syphilis.

ANDREWS.

SOME OBSERVATIONS ON THE ANATOMY AND PHYSIOLOGY OF THE EAR.*

BY W. F. COLE, M.D., WACO, TEXAS.

Man being the highest type of animal creation, we find in him the highest development of the organs of sensation. It is interesting to trace the evolution or development of the acoustic mechanism from primitive animal life. The Protozoa appears not to have any special organ of hearing. Certain forms of Radiata appear to have rudimentary acoustic nerves. Many forms of the Gastropoda have their organs of hearing connected with their organs of locomotion. The Cephalopoda have their organs of hearing in the head as the Vertebrata.

Worms also have acoustic vesicles in the head connected to the oesophageal nerve ring. Insects, such as grasshoppers and locusts, usually have their acoustic organs located at the side of the first abdominal segment or at the base of the first segment of the anterior legs.

Other insects have their organs of hearing located in their antennae or feelers. The lobsters and other large crustacea have their organs of hearing located in the basal joints of the first pair of antennae. Nearly all vertebrate animals have distinct organs of hearing, though they differ much in form. Fishes have no external or middle ear, and no cochlea in internal ear. Reptiles, except the crocodile, are without external ears. In some of the reptile class the membrana tympani is located externally, appearing as a thin scale in connection with the skin. In reptiles and fowls the membrana tympani is supported by a single bone or chain of bones supporting the membrane in convex form, much as the handle supports an opened umbrella.

In reptiles and fowls the incus and malleus are external to the ear and appear as quadrate and jugal bones supporting the jaws. Mammals, of course, have acoustic organs much the same as man. Beginning with the gelatinous bulbs and vesicles in the snail we may trace the evolution or development of the organs of hearing. If we could project the optic nerve of man with the eye as a terminal bulb from the orbit, how similar it would be to that of a snail. If we could divest the bulbous auditory nerve of its terminal mechanism, the laby-

*Paper read before the Texas State Medical Association at San Antonio, April 27, 1899.

rinth and tympanum, how like it would be to that in primitive life! In the simple forms of animal life the organs of hearing have very simple functions; they serve to warn against an enemy or to find a mate. The human ear, though so wonderful as a mechanism, and so superior to that in the lower forms of life, yet is of itself imperfect, having its limitations like the eye. As there are X-rays to the eye so there are X-sounds to the ear. The lowest tone audible to the human ear has 16 vibrations to the second, and the highest 24,000. All other tones are inaudible. As we find color blindness in certain individuals, so we find tone deafness in others.

The wonderful mechanism of the eye and the ear is the wonder and astonishment of scientists who have been plodding since the world began in working out the principles which are there embodied. And to-day are still plodding to reach the end of attainable knowledge on these subjects. The ear, by reason of its secondary importance and more complicated mechanism, is less understood than the eye. Much of the science of acoustics is theoretical. I believe that I have had the fortune to clear up some of the mysteries concerning the ear.

The accepted theory is that sound vibrations are transmitted from the membrana tympani through the ossicles to the vestibule and thence to the cochlea, though it is accepted that some sound passes through the air of the tympanum and fenestra rotunda. My own observations and experiments have led me to believe that the reverse is true. I have also been enabled to clear up the mystery of the so-called artificial membrana tympani. I have reason to assert that sound ordinarily passes not through the ossicles and fenestra ovalis, but through the air of the tympanum and fenestra rotunda. My theory is not new, for according to Politzer it was advocated by the older physiologists, particularly Pascal, and at a later date by Sapolini and Pecchi; but I do not know upon what grounds they based their theories. My theories are based entirely upon my own observations and experiments, and deductions therefrom. I read a paper at Atlanta, in March, 1898, in which I related my first experiments, and I am forced to repeat somewhat. A young lady, attending college, consulted me. She had suffered with otorrhea in both ears from childhood, and was subjected to occasional attacks of mastoiditis. She had neither membrana tympani nor ossicles in either ear. The discharge in both ears was from the attic. In the left it was slight, while in the right it was profuse. The hearing, as to distance, was for the right about $\frac{6}{10}$, the left $\frac{1}{10}$; that is, for the right she heard 18 feet where she should have heard 30 feet. I did

mastoid operations on both sides. After the operations, the hearing for the left was unchanged, but for the right she heard at five feet what she should have heard at forty. She was compelled to leave school for lack of hearing. I tried various artificial membrana tympani with no success, except a paper tube, which gave fair satisfaction when we could place it right by accident. Her hearing departed with the cessation of the otorrhea. I continued to see her occasionally for the purpose of treating the ear and experimenting with the various artificial membrana tympani. On these occasions I irrigated the ear with a syringe. While the water remained in the attic her hearing was acute. But, to use her language, "It departed with a gurgle." Such phenomena had been noted by most otologists and the accepted explanation had been that the water acted as a conductor to the fenestra ovalis in lieu of the ossicles. It occurred to me on one occasion that perhaps the improvement might be due to concentration of the sound waves upon the fenestra. It should be borne in mind that in the normal ear the tympanum is practically a closed cavity, being cut off from the attic and antrum by the ossicles and ligaments. So that when they and the membrana tympani are destroyed the external auditory canal terminates in an enlarged cavity composed of the tympanum, attic and antrum. I have shown this by means of a schematic drawing, No. 1. This may be illustrated with a

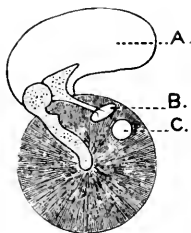


Fig. 1.

speaking tube in which the tube terminates, not in the small ear tip but in a very much enlarged opening. The sound waves being dispersed instead of concentrated. I found that cotton wool placed in the attic and anterior part of the tympanum acted the same as the water had done. I found that the effect was the same whether the fenestra ovalis was or was not closed so long as the attic was closed. I found that the hearing was lessened when the posterior part of the tympanum was covered with cotton saturated with water or vaseline.

These experiments explained to me the occasional improvement of hearing in such cases by the so-called artificial membrana tympani. The occasional improvement in hearing being due to the accidental cutting off of the attic and antrum, and thereby concentrating the sound impulses upon the fenestra rotunda. My conclusions were verified in numerous other cases, some of which I will mention.

The application of the cotton wool being impractical I began to devise some other means of concentrating the sound upon the fenestra rotunda. I found good results from the use of a section of thin rubber tube, such as Politzer used for the poor, but this tube was uncertain because the wall of the tube did not cover the fenestra or else the wall of the tube covered it by slipping over the promontory. I overcame this fairly well by cutting a notch from one side of the inner end of the tube, which would allow the sound to pass to the fenestra, the notch being directed to it. These tubes were imperfect, due to the fact that they did not fill the meatus properly nor direct the impulses upon the fenestra. I then devised some cone-shaped tubes, shown in cut No. 2, which have been quite satisfactory in a number of my own cases as well as others.

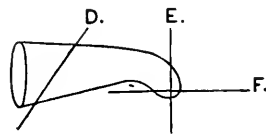


Fig. 2.

The young lady referred to in the article has been wearing my tubes for more than a year, before which she used the section of tube described. She visited my office recently while attending a church convention, and I made a test of her hearing in the presence of Mr. Slayden, the President of the Slayden-Kirksey Woolen Mills; Mr. Alfred Abeel, Receiver of the Waco and N. W. R. R. Co., and Dr. A. H. Snead and others. Without the tube she heard and repeated numbers at five feet; with the tube she repeated the same at thirty-five feet, being normal hearing.

During the summer of 1898 I conducted some experiments at the hospital at Golden Square, London. Dr. H. Lambert Lack, London, F.R.C.S., a member of the hospital staff, made the tests upon three cases I give here as reported by him:

Hospital No. 5636. female. æt. sixteen. Deaf since two years old. Drums and ossicles gone in both ears. Hearing with wool in ears, loud voice well heard at forty feet: without wool, loud voice not well heard at six feet. It will be seen that by the law of acoustics the improvement was nearly fifty-fold, and was the same for both ears.

Hospital No. 5147. female. æt. nine. Right ear: deaf all her life. Drums and ossicles gone. With wool hears voice thirty feet, without wool hears voice twenty feet. In this case the improvement is more than two-fold.

Hospital No. 3688. male. æt. twenty-five. Drums and ossicles gone in both ears. With wool in, hears. with right ear, voice forty feet; without wool, four feet. Left ear, with wool in, hears voice four feet; without wool does not hear voice. It will be seen that the improvement of the right ear in this case is one hundred-fold.

Dr. Gibbs, of the Illinois State Hospital for the Eye and Ear, writes me that he has two patients who are using the tubes with great satisfaction. Other communications too numerous to mention, endorsing my investigations, have been received.

Theories long promulgated attain almost the force of scientific facts. The theory that sound passes to the internal ear through the ossicles is a familiar illustration. Elaborate experiments have been made to illustrate the fact, and when Edison perfected the phonograph many aurists accepted this as conclusive proof, and to a superficial observer it did appear pretty conclusive: but my investigations lead me to assert that Mr. Edison's phonograph proves my theory that sound passes to the internal ear not by way of the ossicles, but through the air of the tympanum and the membrana tympani secundaria. When we examine the structure of the drumhead we find it a thin membrane whose strength is due to muscular fibers which radiate from the handle of the malleus to the periphery of the tympanum, and these fibers are as various in length as the strings of a harp. Furthermore, the membrane is not uniform in tension nor is it of uniform thickness, so that the different segments of the membrane would have different fundamental pitch and would vibrate to different tones as the strings of an instrument. In no other way can we account for the capacity of the human ear to hear so great a multiplicity of sounds at the same instant. It is well known that the director of an orchestra or a chorus of voices can easily distinguish the tone of any instrument or any voice from all the others; but the phonograph cannot copy an orchestra nor a chorus as heard by the human ear because it has not the capacity, because the metallic diaphragm vibrates not in segments but as a whole. Many tones are

neutralized in their impulses upon the metallic disc, due to the condensation of one sound wave being synchronous with the rarefaction of another wave.

I assert that the phonograph cannot repeat orchestral nor choral music as heard by the human ear. The loudest sounds will make their impression upon the wax, while the interference of others will result in a squeak. I believe that sounds of great volume and intensity do pass to the internal ear through the ossicles, the membrana tympani vibrating as a whole. What then are the functions of the ossicles and the tympanic cavity? The ossicles are nothing more than a system of levers to regulate the tension of the membrana tympani, much the same as the bridge and the sounding post in a musical instrument regulate the tension of the strings. The tympanum serves much the same purpose as the body of the violin to reinforce or magnify sounds. The principle of the reinforcement of sound by confined bodies of air is well understood in acoustics, being the foundation principle in all musical instruments. As previously stated, the mechanism of the human ear is peculiar to mammals. When the outer drumhead and the ossicles are destroyed a person hears much the same as a serpent whose membrana tympani is united to its skin. If the tympanum and labyrinth were eliminated one would hear much the same as the snail, and strange to say, Sexton, Gruber, Bezold, Goldstein and others have reported cases of some hearing where the whole of the labyrinth had been exfoliated. In the use of my tubes I have only applied the well-known principles of acoustics concentrating the sound impulses upon the inner drumhead or membrana tympani secondaria.

I have failed to secure results in certain cases where the mucous membrane of the tympanum had been substituted by epidermis, the inner drumhead doubtless being thickened.

Cut No. 2 shows shape of tubes as manufactured by Mayer, Meltzer & Co., of London, or Truax, Greene & Co., of Chicago. The lines D, E and F represent manner of cutting the tubes with scissors to secure the proper shape.

SINUS-THROMBOSIS; CURE WITHOUT OPENING THE SINUS.*

BY ROBERT LEVY, M.D., DENVER, COLO.

Professor of Physiology and Laryngology in Gross Medical College; Laryngologist to Arapahoe County, St. Anthony's and St. Luke's Hospitals, etc

Case.—J. B., female child, aet. six years, was first seen by me through the courtesy of and in consultation with Dr. G. B. Crews, November 17, 1898. The child's father had died of tuberculosis, with the exception of which there was nothing important in the family history. About two years ago, after exposure to cold, there occurred severe earache in the left ear, but unattended with any discharge and continuing several days. The child gives evidence of enlarged tonsils and the presence of adenoids, which, in a subsequent examination, was confirmed. During the past year the child has been showing signs of slight deafness. On November 11, 1898, without apparent cause, the child was again suddenly taken with severe pain in the left ear, which continued uninterruptedly with great severity until the evening of November 12th, when a sudden profuse, purulent discharge from the external canal occurred. The pain in the ear, although considerably diminished, did not cease. The child seemed nervous, restless, and apparently very ill. On the evening of November 14th, without any warning, a sudden severe chill occurred, followed by great fever, but no sweating. The following morning another severe chill caused the mother much anxiety on account of the great depression, pinched appearance and general distress which followed.

At the time of my examination I found the child very irritable, presenting a general appearance of depressed vitality, rapid pulse but no rise of temperature. Upon examination of the ear a very moderate amount of discharge of a purulent character, without odor, was seen. After cleansing, a small perforation was detected in the posterior inferior quadrant. There was no displacement of the auricle, no swelling over the mastoid, but decided tenderness over the tip which extended down the neck. Upon close investigation, this tenderness was also marked over the region of the lateral sinus. There was frontal headache, coated tongue, loss of appetite, vomiting and vertigo upon moving.

*Presented to the Western Section of the American Laryngological, Rhinological and Otological Society at San Francisco, March 28, 1898.

A general expectant plan of treatment was instituted, and the case carefully watched until November 23d. when all constitutional symptoms had become gradually worse. Up to this time there had been seventeen distinct and severe chills. The pulse continued high, never less than 120, while the temperature was exceedingly irregular, reaching 105 F. in the axilla and at times being as low as 96 F. The anorexia, vomiting and vertigo did not abate. The child continued very restless and sleepless; was emaciated and weak. The local symptoms did not vary much, the discharge continuing more or less, at times being quite scanty, at others rather free. The pain remained localized to the tip of the mastoid and to the region of the sinus. No swelling or redness could be detected. It was evident that the condition was one of great gravity, pointing to purulent deep-seated mastoiditis with thrombosis of the lateral sinus.

Operation was urged and, after much discussion, consented to by the mother. Removal to a hospital was, however, absolutely refused, which formed a serious handicap to opening the lateral sinus. At 7 p. m., November 23d, with the assistance of Drs. Crews, Joseph and Pershing, the latter having been called in consultation to confirm the diagnosis of thrombosis, the operation was performed. The general condition of the patient was so poor that she almost succumbed during the administration of chloroform and before the operation was begun. The mastoid was rapidly exposed and a normal cortex discovered. Upon entering the antrum, however, a small quantity of pus escaped and soft bone and granulations presented. With the curette this was thoroughly cleaned away, the mastoid cells exposed and all necrosis removed. At this stage of the procedure the advisability of entering the sinus was conscientiously discussed. Owing to the very precarious condition of the patient and the unsatisfactory surroundings, it was deemed best to avoid further operative interference, with the expectation of opening the sinus later should the urgent symptoms not abate.

The child rallied well from the shock of the operation, and by the fourth day presented a normal temperature, which continued all day, and a pulse which did not rise above 90. Her general condition was much improved, the restlessness and irritability having passed. Satisfactory progress continued until the ninth day, when the temperature suddenly rose to 103 F. Upon the tenth day, after decided chilliness, the temperature rose to 105 F., dropping within three hours to 98 F. The chilliness, followed by high temperature, continued almost daily until the thirty-fourth day, becoming, however, gradually less and followed by a temperature of less height, and con-

tinuing but a few hours. The depression in temperature during the entire course was very marked, being as low as 95 F. upon several occasions. Vomiting continued more or less, as did also the pain behind the ear. On the nineteenth day severe pain in the right ankle occurred, to which was added, on the following day, pain in the right knee, which continued for some days and finally disappeared. Upon the return of the chills, high temperature and other alarming symptoms, operation upon the sinus was again urged, especially in view of the fact that the child had made some favorable progress in point of strength. It was pointed out that the condition was one which would doubtless end fatally without operation, but the mother firmly and absolutely denied her consent. A very unfavorable prognosis was therefore insisted upon, the case placed under the care of Dr. Crews with the suggestion that supporting measures be all that could be done. At the end of the thirty-fourth day, the temperature was practically normal, the pulse but slightly accelerated and the general condition greatly improved. This improvement continued with occasional fluctuations until at the end of two months when the child was completely recovered.

With such a history one is placed in the awkward position of determining the correctness of a diagnosis of sinus-thrombosis. Had the case terminated fatally no such question would be raised. In view, however, of a favorable termination, and noting that it is extremely rare for these cases to recover without operation, as also with operation, one must have considerable conceit in his diagnostic skill to insist upon the diagnosis of sinus-thrombosis. Without having seen the thrombosed vein, it is only by a correct interpretation of symptoms, the preponderance of which points to sinus-thrombosis, that one may conclude that the diagnosis as above stated is correct. Nevertheless, it doubtless remains an open question as to whether the constitutional symptoms were not the result of septic infection from a purulent mastoiditis without involvement of the sinus. Had the case progressed favorably and improvement continued uneventful after the operation, which was thoroughly performed, complete communication between the antrum and the tympanum having been established, I should have dismissed it with the confidence that the original diagnosis had been incorrect. Owing, however, to the recurrence of all symptoms indicative of sinus-thrombosis ten days after the mastoid operation, I am forced to the conclusion that no error was committed. Bacon agrees that "When a patient suffering from purulent otitis media, and especially if there be symptoms of mastoid

disease, has a sudden chill, followed by a rise in temperature, the indications point to the formation of a thrombus, provided a careful examination of the patient's general condition has been made and other diseases can be excluded." In this case most thorough and careful investigation failed to reveal any other cause for the above mentioned symptoms.

The complex of symptoms as outlined by the history of this case can be explained upon no other ground, and as Whiting states "if the course pursued by the affection is at all typical, there musters in imposing array a sequence of symptoms which are quite irreconcilable, when associated with a suppurative inflammation of the ear, with any ailment other than infective involvement of the sinus." Accepting the correctness of the diagnosis in this instance, one is forced to the conclusion that the thrombosis did not undergo disintegration, that it proceeded no further than the early part of the second stage, as outlined by Fred Whiting, and that a cure by organization of the clot had taken place.

The Radical Treatment of Chronic Suppurative Otitis Media—

H. O. REIK, Baltimore—*Mary. Med. Journ.*, May 6, 1899.

This treatment applies to those cases that have resisted careful conservative measures.

Anatomical boundaries and relations are described. When a purulent discharge has resisted antiseptic treatment for a period of a month or two some surgical procedure should be attempted. By removal of one or more ossicles, or what remains of them, the drainage is improved and good results may follow. In about fifty per cent of cases this method is applicable. In other instances of prolonged suppuration the Stacke or Zaufel operation should be performed.

These operations consist in the removal of all diseased tissues, and the converting of the mastoid antrum, middle ear and external auditory canal into one large cavity which is to be lined with skin. The technique is described. One case is reported cured by the Schwartze-Zaufel method.

LEDERMAN.

THE USE OF GELATO-GLYCERINE BOUGIES IN THE TREATMENT OF EARACHE.*

BY GEORGE L. RICHARDS, M.D., FALL RIVER, MASS.

Otologist and Laryngologist to the Fall River and Emergency Hospitals; Fellow American Laryngological, Rhinological and Otolological Society, Etc.

In an article on Earache, published in the *Boston Medical and Surgical Journal* of July 28th, 1898, I stated that I had been using for some time gelato-glycerine aural bougies, in which was incorporated various anodynes, for the relief of the early stages of earache from whatever cause.

Further experience with these has convinced me more than ever of their value, especially in an early stage of acute otitis media and in acute otitis externa. They can be inserted in the ear without difficulty, by simply washing off the lycopodium powder with which they are covered: they are then very slippery and with the affected ear uppermost easily slip down into the canal. Here the bougie soon dissolves, the anodyne is brought directly into contact with the inflamed surfaces and the pain is relieved. Besides being a medium for the exhibition of other remedies the glycerine is of itself distinctly curative, in that it tends to draw out some serum from within and lessen the tension. This favors absorption and a paracentesis may be prevented. After insertion the ear should be stoppered with absorbent cotton or gauze and a lightly filled hot water bottle placed at the side of, or over the ear. Cases which have gone beyond an early stage are of course beyond relief with this remedy and demand treatment appropriate to the condition, whether paracentesis or otherwise. Many a case of acute earache in children will, if promptly treated in this manner, at once subside without going on to severe inflammation.

So far as I am concerned there is nothing new or original in this except that I have slightly modified the formula of Wood's by the addition of the carbolic acid, and after some considerable experimentation have got the proportions of the gelato-glycerine media so that any apothecary can prepare them. These aural bougies were first originated by Prof. Gruber, of Vienna, are familiar to those physicians who have been students of his. He, however, neither in his book on diseases of the ear nor in his division of the Vienna

* Read before the American Laryngological, Rhinological and Otolological Society, at its Annual Meeting, in Cincinnati, Ohio, June 2, 3, 1899.

formulary as given in Landesmann's *Die Therapie an den Wiener Kliniken* ever told how they could be made, and physicians who have obtained them in Vienna have not been able to get their apothecaries to make them up afterwards in this country, in a satisfactory manner.

In Landesmann's book it is simply stated that they can be obtained of Grohs, the apothecary, Währinger strasse, Vienna. The translator of Gruber's book says that Messrs. Bullock, of Hanover Square, London, also make them, but no working formula is supplied. In the *Journal of Laryngology*, January, 1898, R. H. Woods, of Dublin, gives a formula which I regard as superior to any of those of Gruber. Each of Woods' bougies contains three-sevenths of a grain of liquid extract of opium, one-fourteenth of a grain of cocaine, and one-fourteenth of a grain of atropia in gelato-glycerine. To this I have added three per cent of carbolic acid for its anesthetic and antiseptic properties. Woods does not give in his article the proportions of gelatine and glycerine, but says they should be such that while remaining fluid at the ordinary temperature of the air the bougie should melt at the body temperature or a little before, thus ensuring their ready dissolution when placed in the ear.

I offer in the formula that follows a correct working formula, and one that any pharmacist with a proper mould can use, so that they can be made in one place as well as another. My own druggist made them in a mould intended for urethral bougies and then divided each one into three. As this mould held just 14 urethral bougies the odd number of 42 is accounted for in the number prepared. After making they are covered with lycopodium powder and dispensed in a bottle as they are of course somewhat hygroscopic.

FORMULA.

Acid carbolic	minims	7
Fl. ext. opium	minims	6
Cocaine	grains	3
Atropine sulph.	grains	3
Aquae	minims	52
Gelatine	grains	18
Glycerine	grains	158

To make 42 bougies.

In size they should be no larger than will readily slip into the external canal. The size as made in a urethral bougie mould has proven satisfactory. Woods reports his results with these bougies in the ear complications of the exanthemata as very good and thinks many cases were saved the necessity of a paracentesis. This latter he is anxious to avoid where possible on account of the danger of the entrance of micro-organisms from without, and the conversion of a serous into a purulent otitis.

Whenever paracentesis is indicated it should be performed. There is, however, no doubt that if used early enough these bougies will save many a case from the necessity of paracentesis.

ADENOID VEGETATIONS AND DIPHThERIA.

BY A. PLOTTIER.

Translated by
W. H. VITTM, M.D., ST. PAUL.

Hypertrophy of the lymphoid glands in the naso-pharynx, and especially of the pharyngeal, or Luschka's tonsil, is a very common affection of infancy. It is very probable that it is more common even than is generally supposed. As a matter of fact these adenoid vegetations often pass unnoticed because, not being greatly developed, they remain, so to speak, latent, and give rise to no symptom which might attract attention to their existence.

On the other hand, in case of an acute attack of adenitis, or when the tumor is of large size, we observe a series of difficulties which call for our intervention. If in these cases, as often happens, the physician contents himself with simple irrigations of the nasal fossæ, he will generally obtain only a partial recession of the tumor and the remaining portion, which persists obstinately, will sooner or later be the source of grave complications. It thus occurs, that a large number of children who present a healthy appearance are really afflicted with adenoids, which are unsuspected.

It is a fair question whether these children are not more exposed than others to certain diseases, especially to diphtheria. In other words, whether in certain cases an etiological relation could not be established between adenoid vegetations and diphtheritic angina.

In the classical works on the subject it is stated that among the predisposing causes in the etiology of this disease are all the common inflammations of the upper respiratory and digestive tracts. Rhinitis, angina, laryngitis, etc., are rightly said to favor the development of Löffler's bacillus: but, so far as my knowledge goes, it has never occurred to any of our authors to suggest the possibility of the microbes making their attack at the level of Luschka's tonsil. I do not know whether any foreign work has been published which treats of this point or not: at any rate, so far as France is concerned, my bibliographic researches have been fruitless.

It is evident that in the great majority of cases the affection begins on the palatine tonsils, or at least that the initial lesion appears about the level of the pillars of the palate. All these parts are readily examined by depressing the tongue.

Under certain circumstances, as we shall see later, we have the right to assume that the false membranes primarily develop on the more or less hypertrophied pharyngeal tonsil, and spreading little by little from that point finally involve neighboring structures which are more accessible to view.

Löffler's bacillus particularly affects tonsillar tissue which seems to afford a suitable resting place for all sorts of microbes; and the disease, as we have all seen, nearly always begins on one of the tonsils.

Histologically, this tissue is an adenoid tissue exactly identical with that of the vegetations of the naso-pharynx; further, these tumors present irregularities of surface similar to the crypts of the palatine tonsils, which are capable of receiving and harboring all the various micro-organisms of the nose and mouth. The analogy is, plainly, very complete, and the diphtheritic infection might easily attack the pharyngeal tonsil and run its course unnoticed at first, particularly if it should remain localized and not attack the neighboring structures.

Again, adenoid vegetations are very often subject to acute inflammatory attacks, and an adenitis, like a rhinitis or a laryngitis, is capable of awakening into virulence the hitherto latent microbes and of affording them a good soil for development. Thus the Löffler bacillus which is often rendered innocuous by the buccal or nasal mucus of a healthy person, might, by a sudden attack of adenitis, be stirred into such activity as to set the disease going to the fullest extent.

If we take into consideration that these subjects are usually weakened by imperfect respiration we shall be justified in considering them especially vulnerable, and at the same time incapable of offering an effective resistance to the development of infectious germs.

These views, which may at first seem somewhat theoretical, are amply confirmed if we examine the naso-pharynx of children who have died of diphtheria. In a series of thirty-eight littlepatients who died of diphtheritic angina or its direct consequences, we have found that more than 50 per cent suffered from adenoids more or less developed.

These observations were made at Hôpital des Enfants-Malades from December 1, 1898, to February 28, 1899, and resulted as follows:

TABLE.

Sex.	Age.	Malady.	
Boy	4 years	Diphtheria.	No vegetations.
Boy	5 months	Diphtheria.	No vegetations.
Boy	4 years and a half ...	Diphtheria.	Slight vegetations.
Boy	15 months	Diphtheria.	No vegetations.
Girl	5 years	Diphtheria.	No vegetations.
Boy	2 years	Diphtheria.	No vegetations.
Boy	4 years	Diphtheria.	No vegetations.
Boy	2 years and a half ...	Diphtheria.	Vegetations fairly developed.
Girl	21 months	Diphtheria.	Vegetations fairly developed.
Boy	21 months	Diphtheria.	Vegetations fairly developed.
Girl	15 months	Diphtheria.	Vegetations fairly developed.
Girl	4 years	Diphtheria.	Vegetations very abundant.
Boy	2 years and a half ...	Diphtheria.	Vegetations very abundant.
Girl	3 years	Diphtheria.	Vegetations fairly developed.
Boy	5 years	Diphtheria.	Vegetations fairly developed.
Boy	7 years	Diphtheria.	Vegetations fairly developed.
Boy	16 months	Diphtheria.	No vegetations.
Girl	9 months	Diphtheria.	No vegetations.
Boy	9 months	Diphtheria.	No vegetations.
Girl	26 months	Diphtheria.	No vegetations.
Girl	18 months	Diphtheria.	Slight vegetations.
Boy	15 months	Diphtheria.	No vegetations.
Boy	14 months	Diphtheria.	Vegetations very abundant.
Girl	3 years	Diphtheria.	No vegetations.
Boy	1 year	Diphtheria.	Vegetations abundant.
Girl	6 years and a half ...	Paralysis.	Vegetations very abundant.
Girl	4 years	Diphtheria.	Slight vegetations.
Boy	18 months	Diphtheria.	No vegetations.
Boy	16 months	Diphtheria.	No vegetations.
Boy	23 months	Diphtheria.	Slight vegetations.
Boy	11 months	Diphtheria.	No vegetations.
Girl	11 months	Diphtheria.	Vegetations fairly developed.
Girl	2 years and a half ...	Diphtheria.	No vegetations.
Boy	5 years	Diphtheria.	No vegetations.
Girl	4 years and a half ...	Diphtheria.	Vegetations abundant.
Boy	2 years	Diphtheria.	No vegetations.
Girl	3 years	Diphtheria.	Vegetations abundant.
Boy	2 years	Diphtheria.	Vegetations very abundant.

Now, if we take these observations as a whole, without regarding the age or sex of the child, we find that out of 38 dead of diphtheria, 20 gave evidence of having suffered from adenoids during life.

These figures seem to be the most solid argument possible in favor of our view, for in no other infectious disease have we encountered a like proportion.

The exploration of the naso-pharynx is very easily accomplished on the cadaver. The soft palate is pulled forward by means of a little hook attached to a thread. This enables the fore or little finger to penetrate the cavity with ease. In each case where our examination revealed the presence of these tumors, they were removed by the aid of a Moritz Schmidt curette. They were more or less abundant in the different cases, obstructing the choane completely or in part. They showed considerable difference in color and consistence: sometimes soft and tumefied, indicating an acute inflammatory state: sometimes firm to the touch and presenting that roseate hue which is indicative of chronicity.

We only considered as adenoids those cases where the tumors were pediculated and lobulated and came away cleanly from the wall of the naso-pharynx, and were examined after removal. The finger often gave the sensation of a granular condition or of a diffused tumefaction such as we often see in the soft palate, the pillars and the uvula during the course of diphtheria. This state of things might lead to error if one were not forewarned.

In two of the cases the curette brought out large pieces of adenoid tissue covered with grayish adherent false membrane, while at the same time the faucial tonsils were covered with a like deposit. In one of the little sufferers we found false membranes on the vegetations, while the mouth was completely free. In this case it is probable that, owing to their situation, the deposits escaped contact with the detergent washes whose action is limited to the buccal cavity. It may be stated that here in France, since the introduction of anti-diphtheritic serum, it is unusual to see the false membranes persist up to the time of death. As a general thing, during the 36 to 48 hours following the injection, the membranes become detached, not to reappear, in the majority of cases. This leads us to conclude that the reason for not finding deposits on the adenoid vegetations more frequently at autopsies is that the serum has already caused them to be thrown off.

Finally, in some of the subjects examined, the mucous membrane of the naso-pharynx was found dense and resistant as if atrophied, and giving to the finger the sensation of a membrane tightly stretched over a bony surface. We thus found all degrees of difference from atrophy of Luschka's tonsil to hypertrophy of that structure.

Thus we see that, in our statistics, more than 50 per cent of children dead from diphtheria suffered from adenoids more or less developed. We must ask ourselves the question whether a like percentage is to be found among those who have recovered. In other

words, does the presence of these tumors impart a peculiar gravity to the disease? Recorded observations in this direction are unfortunately wanting, but we must admit, *a priori*, that the presence of adenoid vegetations, by increasing the mucous surface of the nasopharynx, favors the development of false membranes by extension, and, as a consequence, the absorption of toxines from a larger surface. Again, the insufficient respiration caused by their presence puts the patient in a poor condition for resistance.

In the toxic forms of diphtheria, which attack the patient overwhelmingly, there are usually grave general symptoms from the first. The examination of the throat reveals the presence of irregular, thick membranes of a dirty grayish color invading the tissue often over large areas.

But there are also cases where the false membranes are scattered and thin, such as one sees in mild attacks, and yet the child presents grave symptoms of intoxication. If in such cases a careful examination does not reveal infected spots scattered over the posterior part of the tonsils, in the nasal fossæ or at the base of the tongue, we should extend our examination to the pharyngeal tonsil, for it is very likely that we shall find hidden there the source of the infection.

It may be added that false membranes situated on adenoid vegetations, from their very situation, are unaffected by gargles and washes which are used by the mouth. From this fact, the formation and absorption of toxines continues in the naso-pharynx after the mouth and throat have been thoroughly cleansed.

Under certain circumstances, during the prevalence of an epidemic of diphtheria, we may see what is apparently a simple sore throat, characterized only by redness of the mucous surface, and free from false membranes, which is yet capable of propagating the disease, and in which an examination of the buccal mucus will reveal the presence of Löffler's bacillus. These sore throats, described as catarrhal or bacteriological diphtheria, are also known as latent or larvate forms. They are probably ordinary diphtheria where the anatomical lesion has remained undiscovered, either by reason of its slight development or because it is situated in some locality hidden from view, particularly behind the palate. Here an exploration of Luschka's tonsil and its surroundings would, in a majority of cases, furnish a key to the situation and reveal a point of infection which would have escaped a less careful examination.

If, under these circumstances, we insist particularly on the importance of a most conscientious examination, it is because most authors regard the existence of this so-called catarrhal diphtheria

with extreme suspicion. The early diagnosis of a diphtheria primarily local, and limited to the pharyngeal tonsil, would be of the greatest service to the patient and most important in view of the treatment.

The same might probably be said of certain cases of sudden croup, where a careful examination would enlighten us as to their true cause, that is, the presence of false membranes, which, having their origin on the adenoid vegetations, have invaded the larynx without giving rise to a pseudo-membranous angina. Sevestre and Martin have observed that false membranes sometimes originate on the nasal mucous membrane and give rise in a like manner to a condition resembling a sudden seizure of croup. Without denying the existence of a primary localization of the affection on the laryngeal mucous membrane, we are inclined to think that sudden seizures of croup are less frequent than is generally supposed.

These same authors, in their work on diphtheria, draw particular attention to those cases where the false membranes appear to originate on the posterior surface of the uvula. The lesion, spreading in every direction, ends by enveloping the whole organ in a sort of pseudo-membranous sheath.

This form, the authors say, appears to be due to the extension of a nasal diphtheria. We think, on the other hand, that a pseudo-membranous adenitis is the cause: the invasion of the posterior surface of the soft palate and the uvula would take place by gradual extension and terminate in involvement of the other parts of the throat.

For those cases where the false membranes appear to originate on the posterior pillars or the oro-pharynx, with or without regard to the faucial tonsils, we should be tempted to assign the same etiology: the last mentioned structures may remain free or become involved secondarily.

In a child suffering from adenoids, diphtheria is just as likely to be located on the pharyngeal as on the faucial tonsil. Their similarity in structure and their situation at a point especially infested with microbes, place them on an equality so far as receptivity is concerned. We may add that diphtheria of the naso-pharynx may also follow or accompany other forms of the disease.

When diphtheria is primarily located in the nasal fossæ, it often happens that the false membranes are most developed at the posterior part. This causes a tumefaction of the parts and more or less complete obstruction of the nasal cavities, at the same time a more or less abundant muco-purulent or sanious discharge appears at the nostrils. Sometimes, indeed, the symptoms of this condition are so slight that it escapes detection.

While admitting that nasal diphtheria may exist independently, we are of the opinion that, in a large number of cases, adenoid tumors primarily infected, are at the bottom of the trouble. The mechanism might be cited to explain the cases of invasion of the middle ear through the Eustachian tube. The adenoid vegetations by their intimate relations with the Eustachian orifice are best calculated to favor such extension. In addition to this, the mere presence of these tumors, in many cases, causes a tubal catarrh which furnishes an excellent soil for the propagation of the bacilli. Nevertheless it is possible that, in the absence of any naso-pharyngeal trouble, we may have a middle-ear diphtheria whose point of origin is in the nasal fossæ.

A review of the facts which we have just studied leads us to the following conclusions:

Whenever we find ourselves in the presence of a case where diphtheria is suspected or known to exist, we should bear prominently in mind the possibility of the existence of vegetations, since from our observations it is shown that more than half the children who died of diphtheria were so affected. From these facts arises the absolute necessity of a naso-pharyngeal examination in every case, whether it be to trace a primary lesion of this region or to adopt suitable treatment when it accompanies lesions situated elsewhere: it being possible that the naso-pharyngeal lesion may either precede or accompany other diphtheritic manifestations.

To accomplish this examination we may make use of the following methods:

1. Anterior rhinoscopy. 2. Posterior rhinoscopy. 3. Palpation.

Anterior rhinoscopy can only give us unsatisfactory information under these circumstances, even in the hands of a specialist.

Posterior rhinoscopy is a manœuvre little familiar to most physicians and, in practice, difficult of application. The natural indocility of young subjects, together with the narrowness of the region, which may be still further increased by an inflamed and painful swelling, conditions, we must confess, to render its execution easy. Nevertheless, this method of examination should be tried in favorable cases, where it may be of great value.

Naso-pharyngeal palpation is the method of our choice, it should never be omitted. Even though the finger cannot inform us, as well as the mirror, as to the presence of false membranes on the vegetations, still the mere fact that the latter are present will put us on our guard, and cause us to suspect the possibility of an invasion by these diphtheritic products.

Let us add that palpation should be practiced with the utmost gentleness and rapidity, in order to avoid hemorrhages which might give rise to the entrance of toxins into the blood. The information obtained by this examination will influence the prognosis and the therapy.

In closing, we must insist most strenuously upon the necessity for surgical treatment in all children afflicted with adenoids. The frequency with which these tumors are attacked by diphtheria and the special gravity which they appear to impart to the disease, are demonstrated by the examination of a large number of children who have died of diphtheria.

This new argument may be used to help decide the surgeon or the parents to permit surgical intervention.

Infective Otitis—F. M. WILSON, Bridgeport, Conn.—*Yale Med. Journ.*, May, 1899.

In the majority of cases bacterial invasion travels up the Eustachian tube. Influenza probably furnishes more cases than any other disease. Exanthemata of childhood are a potent factor in giving rise to this affection. The nasal douche is accountable for a certain proportion of attacks.

The nose and naso-pharynx are never sterile, and among the more frequent inhabitants of these regions are mentioned the staphylococcus pyogenes (albus and aureus), the streptococcus pyogenes, the pneumococcus and the tubercle bacillus.

Indiscreet use of the Politzer bag, or forcible blowing of the nose, occasionally causes an inflammation of the middle ear.

Attention is called to the importance of a now well-recognized fact that three-quarters of all ear diseases come from the nose or throat.

Early paracentesis is recommended, as it unloads the overfull blood vessels, relieves the pain and offers a ready exit for the serum, which usually precedes pus. The danger of starting an infective process from the external auditory canal must be considered, and this abortive measure should be carried out under strict antiseptic precautions.

The author prefers the fountain douche after suppuration has occurred. Heat exercises an adverse influence on bacterial growth. Traumatism should be avoided in applying moist heat. Powders are used only at the end of the treatment, as they are apt at times to cake and thus prevent drainage.

Extension of the suppurative process may be in a number of directions, and prompt surgical methods should be adopted.

Sinus thrombosis is now treated on sound surgical principles, and foci of suppuration must be sought for and drained.

LEDERMAN.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting. Held May 24, 1899.

Robert C. Myles, M.D., Chairman.

Dr. Jonathan Wright stated that during the past few weeks he had had an extraordinary run of laryngeal cases, amongst which were three or four cases of tumors. In one of these he found great difficulty in getting hold of the growth with the forceps on account of the great amount of irritability present; he tried Mackenzie's and various other forceps. Finally he took his own snare and had a tip placed on it, which proved quite satisfactory, and he presented it because it worked so well: it could be as easily manipulated in the larynx as in the nose.

He also presented the tip of an ordinary syringe for intra-nasal irrigation. Many years ago he received a letter from the late Dr. Wilhelm Meyer, of Copenhagen, drawing attention to an instrument he devised for irrigation of the nasal cavities in atrophic rhinitis. His experience had taught him that in the back and upper part of the nose it was difficult to remove the crusts which cause a great deal of pain through their continuing *in situ*. The patients were unable to get them out. Dr. Meyer, noting some observations he had published in regard to the matter, kindly sent instruments of his which were devised as to overcome the difficulty. Permission was asked to present them to the Academy. They consisted of three long tubes perforated in a difficult manner, which could be attached to a fountain syringe. Through the pressure of water a stream was thrown directly up to the ethmoid region as the tube lay on the floor of the nose, and so softens the crusts. Believing that these tubes would be difficult to use in the hands of patients, the speaker had applied a simple hard rubber tip to the barrel of a post-nasal syringe which the patients can insert into the nasal cavity and so throw a stream up to the turbinated region. It had worked satisfactorily.

Dr. Francis J. Quinlan thought that the use of the hard rubber douche where there was any obstruction with great resistance

might possibly erode the mucous membrane. He recommended a long piece of rubber with the ordinary attachments of a fountain syringe; with this one could irrigate and the fluid could be kept from entering the Eustachian tube, directing patient always to keep the mouth wide open and avoiding if possible any swallowing effort.

Dr. Jonathan Wright said the syringe was devised for those cases of atrophic rhinitis where the post-nasal syringe did not give the desired relief. The cases needing it were those in which considerable atrophy had taken place, and this nearly always allowed of plenty of room for the insertion of the slender tip.

Bicycle-Pump Spray.

Dr. Robert C. Myles presented a spray-producer apparatus which had recently been shown him. It was operated by a bicycle foot pump. The price was \$1.50. The pressure could be brought up to about thirty pounds.

Dr. M. D. Lederman thought that with thirty pounds pressure ear trouble might result, with the apparatus in the patient's hands. This was a very interesting question. Few individuals appreciate the importance of "blowing the nose" in a proper manner. It is not unusual to find a patient closing both nostrils in an attempt to clear the nasal passages of secretions. This "act" should be brought to our patients' attention. One side of the nose should always be free when such an attempt is made. He will then avoid forcing any secretion or solution into the Eustachian tube. I have seen a number of middle-ear lesions resulting from the forcible application of the atomizer and nasal douche. In my experience the douche should only be employed in "roomy nares," or where such a condition has taken place, the result of an atrophic rhinitis. The atomizer when employed gently is the safer instrument. One-sided nasal obstruction may prevent the return flow of the cleansing solution, if same has been introduced through the patent side, and thus some of the fluid may find its way into the Eustachian tube.

Dr. Wendell C. Phillips took exception with the last speaker. He did not believe that damage could result to the middle ear if the liquid used be aseptic. He thought one could introduce oil or different aseptic solutions with impunity and with no fear of middle-ear difficulty following.

Dr. Jonathan Wright said that we diluted the posterior nasal mucus, which was filled with streptococci and staphylococci, and these were thus washed into the ear. The normal nasal recesses

being viscid this could not happen when the nose is blown. He thought the use of the anterior spray or the syringe was attended with more or less danger in the patient's hands and was very inefficient, and the post-nasal syringe less so than any one thing. The patients should be told not to blow their noses after using the spray. No middle-ear trouble will develop if patients do not blow their noses after using the spray. He had no confidence in the use of the spray in the hands of patients, for they only spray the *al nasi* and not the ethmoidal region of the nose, and so do not accomplish the desired ends.

Healed Papilloma of the Larynx After Operation.

Dr. Thomson presented this case because it was one which was operated upon by the late Dr. James E. Nichols several years ago. The history of the case was briefly this: About February, 1895, she began to have dyspnea, which increased until one year later when there was great obstruction to her breathing. In April, 1895, tracheotomy was performed, and in June one or two papilloma were removed through the tracheotomy wound, and in three more sittings the papillomata were removed entirely. They were on the vocal cords, and they were completely removed by February, 1897. In January, 1898, she began to talk, and now she talks although her voice is somewhat hoarse. She can now get some singing tones. Just two months ago the tracheotomy wound closed up, after being kept open nearly three years.

Dr. Francis J. Quinlan: This boy was brought to St. Vincent's Hospital cyanotic, having swallowed a steel screw some hours before. Upon examination it was found to have lodged between the vocal cords. All efforts to remove by endo-laryngeal proved useless. The patient was anesthetized and an incision was made in the median line dividing the cricoid cartilage and cutting upwards for an inch. The foreign body was grasped and removed with some difficulty, it having a flange at its distal extremity. The wound was thoroughly cleansed and sutured at once, the boy was put to bed and forbade to use his voice. In one week he was up and about, and to-day the line of incision can scarcely be detected. I believe the use of a tracheotomy tube is apt to predispose to septic pneumonia, and always bears an ugly scar. Of course, if I did not have an intubation set at hand I might hesitate in many instances.

Dr. T. Passmore Berens showed a man, aged forty-six, who presented himself in November, 1895, stating that one year previously during an attack of coughing he had partly lost his voice. The loss of voice increased until, at the time of his first visit, he spoke only in a whisper. He lost flesh and had night sweats.

Examination of the larynx revealed a tumor which was edematous, white and coming from the ventricle on the left side. It presented the appearance of the so-called "Eversion of the Ventricle." The vocal cord could be seen anteriorly beneath this mass, but posteriorly the cord seemed to be absent. After removal of the tumor the cord was seen to be represented by a small nodule anteriorly, the rest of the cord absent and its base ulcerated; both arytenoids were edematous.

Examination of the septum showed tubercle bacilli in profusion. There were no chest symptoms. Submucous injections of creosote, according to the Chappell method, reduced the size of the arytenoids, but gave no appreciable result further in the larynx. The mass was removed with curette and pure Mono-ortho-chlor-phenol applied to its base. The larynx was then treated daily with local applications of pure ichthyol for three months, when the treatment was carried on every second day for about six months longer. As small unhealthy granulations appeared they were touched with pure Mono-ortho-chlor-phenol. The treatment lasted practically a year before healing had taken place and the tubercle bacilli had completely disappeared. The small portion of the vocal cord that remained interfered with the vibration of the other cord. This small piece was removed and its base healed smoothly, so that the right cord had no interference in its vibrations. The voice has steadily increased in volume and in clearness, as you can hear. (The patient speaks clearly and can be heard readily in all parts of the room.) He has had no treatment since 1896, and although under frequent observation, there has been no return of ulceration nor of tubercle bacilli.

Two Cases of Salivary Calculus in the Submaxillary Glands.

Dr. W. Freudenthal presented Mr. S., a merchant, forty-three years of age, who felt about a year ago a swelling in his throat which he mistook for a swollen gland. In the beginning this swelling only increased during mastication, causing slight pain. After eating, it discharged freely and the swelling subsided considerably. For the last two months it discharges only every three to four to six days. He is subject to quinsy sore throat every winter. On entering Wharton's duct with a probe, which can be readily done, you feel deep down in the submaxillary gland a hard mass of considerable size. This can also be felt with the finger. There is no doubt that this is a salivary calculus. As the patient did not care to undergo an operation I injected different fluids into the duct in

order, if possible, to dissolve the stone. I used the physiologic salt solution, muriatic acid (very much diluted) and other drugs, but without any benefit. To-day the stone shows the same dimensions as two months ago.

Case II. This patient is thirty-seven years of age and is a cigar-maker. He remembers when a boy having had a swelling of the throat on the right side that disappeared within a week. A year and a half ago it showed itself again at the same site and did not leave him since. About a year ago a swelling appeared directly under his tongue, and his physician, thinking it was a ranula, made an incision. Blood escaped and a day later two small stones. The swelling back in his throat remained the same. This grows larger during mastication. There are constant pains all over his head. Here again we can feel with the finger a hard stone imbedded in the tissues of the submaxillary gland. I shall remove the stone in a few days.

A Case Illustrating the Gleason Operation for Deflected Septum.

Dr. R. C. Myles showed this case. The operation was performed in less than two minutes and no tube was used, because the patient did not return to the clinic for after-treatment, and when he came back the result was better than if a tube had been used. The case was interesting, in that it showed what good results might be obtained without the use of a tube.

A Case of Endothelial Sarcoma of the Nose.

Dr. M. D. Lederman presented this case with the following history: Male, forty-one years of age, born in Switzerland, brass-worker by trade. He had worked in the machine shops for six years in Germany. The atmosphere in his shop was exceedingly dusty. He had pneumonia when eleven years of age, but no other disease of childhood. His family history was good. He came to America in 1891, and in 1892 nosebleeds were the first symptoms he noticed of his present trouble. These occurred about three times a week and usually in the spring of the year. The epistaxis continued for four years and then ceased for a year. In the winter of 1896-97 some difficulty in breathing through the right nasal chambers was noticed by the patient. He then consulted a physician, who found the presence of a growth and advised an operation for its removal. This treatment was refused, as the patient did not think the matter of so much importance. Some bleeding followed the examination but ceased of its own accord.

He then journeyed to Switzerland, and while there a surgeon removed some part of the growth through the nose and naso-

pharynx. This treatment was followed by marked hemorrhage, according to the patient; he estimates that fully a quart of blood was lost, but soon stopped of its own accord after lasting half an hour. No bleeding occurred last summer except when the nose was treated. At the slightest manipulation the nose bled.

In August, 1898, a piece of growth was expelled after forcibly blowing the nose. This mass was about as large as a walnut. A slight hemorrhage followed this incident. After this portion came away the breathing was much easier.

Since the summer of 1898 both nostrils are occluded. He has had considerable discharge of a muco-purulent character and complains of fullness and pressure in the frontal region. The man's general condition is very good and he has not lost much in weight, appeared well nourished and his bowels are regular. His vision is not impaired and he still works at his trade. On examination we find a mass of pinkish tissue occupying both nares in their posterior portion, filling the inferior meati, but not involving the middle turbinates. The growth is quite dense to the probe and seems to arise from the right external wall of the nares, though the antrum is not prominent externally. On trans-illumination some light reflex was observed on both sides. The tumor extends into the rhino-pharynx, pressing upon the Eustachian opening on the right, and enters the posterior space on the left side, not touching the external surface on this side. It is not attached to the vault of the pharynx nor could he find any perforation of the nasal septum.

Posteriorly the tumor presents a cauliflower appearance. A microscopic diagnosis of sarcoma was made, but he removed a portion of the nasal growth and forwarded the specimen to Dr. Jonathan Wright, who was kind enough to make the microscopical diagnosis. In his report he states that some of the cells seem to have sprung from endothelial cells, but the mass of the tumor is made up of spindle cells which are supposed to spring from the fibrous tissue of the blood-vessels. He regards the growth as an endothelial sarcoma.

Exhibition of Two Radiographs of the Antrum Showing Intruding Teeth.

Dr. Holbrook Curtis presented two radiographs. The first showed that the discharge from the antrum, which had lasted for two years after removal of the first molar and constant irrigation, was in reality due to a root of the second molar which intruded the antrum. The second photograph showed that an osteoma was

occupying the left antrum a year after the removal of one from the right which had intruded into the orbit and was operated on by Dr. Weir. Trans-illumination did not show this and it illustrated the oft-times uselessness of the latter method of antrum examination.

A Case of Nasal Hydrorrhea.

Dr. W. Freudenthal presented a woman, aged twenty-nine, married eleven years, has no children and never was pregnant. She is very nervous since her marriage and consulted many physicians for her nervousness. She was also treated for some stomach trouble. For the last five years she has had to sneeze a good deal every morning and immediately after her nose commences to run. It drops constantly for several hours. I told her to collect this and she brought me once a four-ounce bottle filled with this discharge that had collected within two hours. I have here two bottles collected respectively yesterday and the day before which show about an equal amount. You see that it is watery, sero-mucous discharge which presents under the microscope masses of flat epithelial cells. We have here a case of true nasal hydrorrhea which is purely of nervous origin. This neurotic element seems to be the same underlying factor as in the disease known as gastrocucurrhea chronica, and in fact I believe her stomach trouble was nothing else but this gastrocucurrhea.

I wish to mention at this time another case of a gentleman who suffered greatly from insomnia. He was sent to me for operation on his deflected septum. One afternoon I operated—Asch's operation—and at 11 o'clock that night I was called out of bed as his nose was running freely. He sat up all right bent over a cuspidor, his nose discharging constantly. When I saw him the next morning the tube was gone and he was in pretty bad condition. But when I told him I wanted to collect that discharge in order to demonstrate it, he stopped discharging and never had it again.

A Case of Disease of Maxillary Sinus.

Dr. Thom. J. Harris presented this case because of the many interesting symptoms: he hoped also that the members of the Section could render him assistance in its treatment. He had the woman under treatment for more than a year. She presented the following history: She received an injury upon the nose, which was followed one year later by much pain in that organ. A careful

examination at that time of the nose, made under the influence of ether, showed no necrosis or other disease of the septum. Sinus trouble was then thought of, and both middle turbinates were operated upon without relief of the pain. In spite of treatment the pain continued and diffused itself over the face. About four months ago a right-sided purulent discharge appeared, and the right antrum was opened and pus found. The pain still continued despite daily irrigation. About two months ago the Chairman saw the case and suggested more radical treatment. The antrum was reopened by a large opening in the anterior wall and the ethmoidal cells also curetted. Since then the discharge has ceased. The sinus was thoroughly irrigated, but instead of using peroxide of hydrogen solution a normal salt solution and one of boric acid were alternately used. Fifteen grains of iodoform was injected into the antrum every third day. The pain now is about the same. The antrum is now pretty well closed up; there is free drainage through the nose. Some pus comes from the ethmoidal cells. He asked whether still more radical treatment was called for; whether it was necessary to clean out all the ethmoidal cells. It had suggested itself to him that he was dealing with one of those cases where the nerves were affected and there was a neuralgic condition associated with the sinus disease.

Case of Necrosis of Septum with Excessive Crusting.

This case he had under care during the past winter. It was a young man who came to him with entire stenosis of the nose on the right side. Examination revealed a marked deflection of the septum. Two weeks before coming to the speaker perforation of the septal cartilage had taken place. He could not sleep well at night. With saw and forceps Dr. Harris succeeded in opening a passage through the right nares and keeping it open. For three or four months the patient had perfectly clear breathing and he sleeps well. The pain had nearly disappeared. But, coming on after the operative work, there is an excessive and pronounced scabbing which refuses to be set aside. It proceeds from the pharynx right into the nose. In the naso-pharynx some adenoid tissue was found which had been removed with the forceps in two sittings. The speaker asked the members to examine both the nose and naso-pharynx. He asked for the causes of the scabbing and the causes of the pain. There was no specific history obtainable, but for the last few weeks the patient has been receiving ten grains of iodide of potash three times a day.

Specimen of a Calculus from Wharton's Duct.

This specimen was presented by the Secretary for Dr. T. P. Berens.

DISCUSSION ON DR. QUINLAN'S PAPER.

Dr. Wright: It has been the custom ever since tracheotomy has been done to leave the tube in a certain length of time, resulting in scar externally, which is unsightly. I never could see, in many cases, the rationale of doing so. This wound, I believe, should nearly always be closed after removal of foreign body. If it be necessary to do a second tracheotomy this can be done promptly in the hospital and the wound can be opened a second time. Do not leave the tracheotomy canula in it if you can avoid it.

DISCUSSION OF DR. FREUDENTHAL'S CASE OF SALIVARY CALCULUS.

Dr. Wright: I should like to ask Dr. Freudenthal how large a salivary calculus has ever been removed.

Dr. Freudenthal: I forget.

Dr. Wright: I saw a salivary calculus of surprising size at the clinic the other day. It measured seven-eighths of an inch in one direction and over half an inch in the other. It had probably been contained within the duct and gland. In this connection I wish to relate the case of a woman who came into the clinic some years ago with a ranula under her tongue. It was slit open and closed up, but it filled again in a few days. In examining her it was noticed that her neck seemed rather full. In probing around to get at the bottom of the ranula under her tongue, I found a cavity beneath that which went in for a considerable distance: in fact, had the probe not been a long one I might have lost the probe. A bistoury was placed in the opening and it was slipped up when an enormous quantity of grumous material came out. I could not with the full length of my index finger make out the limits of this enormous cavity. How long it had been there I could not learn. Evidently it was a dilated salivary duct which had attained this enormous size. In order to demonstrate, one of the doctors placed in a catheter and turned on an air pressure apparatus to dilate and show it. Prompt measures were necessary to relieve her. It was a cyst cavity which soon filled up after opening.

Dr. Robert C. Myles: I have seen several cases of salivary calculi and ranula. One of them was most troublesome, occurring in a man who was prominent in social and literary life. He had a cyst or ranula of the submaxillary gland which extended beneath

the muscles and down to the hyoid bone. The accumulation above the bone raised the tongue. I thought that I could cure it by making an incision through the mouth and introducing a tube. For about six months he did well; then inflammation occurred around the tube and he was turned over to a general surgeon. The surgeon opened the cavity beneath the chin, dissected away the sock and burned the base with a Pacquelin cautery. In a few months the cystic cavity refilled and the man was in an almost demented condition. He then came under the care of another surgeon and he removed the submaxillary and sublingual glands from the outside. The patient suffered constantly from dryness of that side of the mouth and finally died in a state of dementia.

I remember a case of an officer in the British army who had a hard, extensive swelling with fistulous tracts beneath the lower jaw which had been diagnosed by several surgeons as a malignant growth of the neck. This man was at Dr. MacKenzie's office, and the doctor's prognosis was that it was not a tumor but a condition due to a calculus. Such was found to be the case. After the stone was removed the patient speedily recovered.

A few months since a man had a stone in the center of his submaxillary gland, and whenever he thought of eating the gland would begin to swell, accompanied by agonizing pain. He could not attend to business. He consented to an internal operation. The gustatory nerve passes obliquely across from the tongue toward the inferior maxillary bone, near the second molar tooth, above the gland and beneath the duct. The calculus was imbedded just posterior to the nerve course. It was about three-quarters of an inch down to the stone, and when it was felt with the finger through the opening, the calculus was embedded firmly within the meshes of the fibrous tissue, which rendered it extremely difficult to dislodge and remove. The operation was done under cocaine anesthetic. The patient is all right, except when he bites a sour apple or something that stimulates the gland quickly and excessively.

Dr. Freudenthal: I had an experience somewhat similar. I operated upon a young man who was a professional clairvoyant. A great deal of pus came out. I wanted to see if there was anything else there and I went in deep; the submaxillary gland laid deep, and deep down one could feel the hard stone. The internal operation was done.

DISCUSSION ON DR. COAKLEY'S CASE.

Dr. Wright: To me the case is one of exceptional interest. I have never seen a case of tuberculosis of the nose unaccompanied by tuberculosis of the lungs. The presence of tubercle with giant cells is not sufficient to establish a diagnosis. It has been stated during late years that the appearance of syphilis of the nose was thought to be typical of that of tuberculosis. There may be a number of giant cells which makes it difficult to distinguish from tuberculosis.

DISCUSSION ON DR. FREEDENHAI'S CASE.

Dr. H. H. Curtis: I do not think true nasal hydrorrhea exists. I do not believe that osmosis takes place through the nasal mucous membrane proper to such an extent, but that the discharge has its origin in the ethmoid cells and sinuses.

Dr. Quinlan: A few years ago a young lady met with misfortune and developed a peculiar condition—excessive lachrymation. Following this excessive lachrymation, which lasted three or four weeks after the death of a near relative, large quantities of fluid descended through her nose, saturating handkerchief after handkerchief. This muco-serous discharge certainly came from the nasal cavity. The mucous membrane of the nostril in some instances is peculiarly active. The accessory sinuses are pneumatic spaces, not secreting glandular structures. This condition simulated, if not fully typifying, that disease known as hydrorrhea.

Dr. Lederman: But there is no history of pain. If there is no pain the fluid could not come from the sinus: if it did, pain would result from pressure.

Dr. Wright: I saw a case of hydrorrhea following the extraction of teeth. It was profuse, and I examined it during the discharge. It came from the mucous membrane of the nose. As to Dr. Curtis' contention that true nasal hydrorrhea does not exist, but that it comes only from the sinuses, I am entirely unable to agree with him. If a section of normal mucous membrane be examined after being imbedded in celloidin, cellular detritus carried by the serum from blood vessels can be traced through the epithelium to the surface.

Dr. Curtis: I should like to ask Dr. Wright if he has ever seen an excessive discharge which might come through the cribriform plate. I remember the case of a woman who rides horseback. Three days a week she cannot ride on account of the dripping which occurs. There appears a watery secretion from the back

part of her nose. I have become convinced that the nasal membrane over the turbinates was not the seat of the trouble, but that the watery discharge was of nervous origin, and either came through the cribriform plate or the ethmoid cells.

Dr. Wright: Does Dr. Curtis believe that the cribriform plate allows the cerebral fluid to drain directly into the nose without a solution of continuity in the nasal mucous membrane and the cerebral envelopes?

Dr. Freudenthal: I examined the case several times and found no affection of the accessory sinuses. I think the discharge comes from all parts of the nose where there are mucous glands.

DISCUSSION ON DR. HARRIS' CASE.

Dr. Meierhof: In reference to the woman, I do not believe that radically Dr. Harris has done enough. These pains may be neuralgic. They are due to the pressure in the antrum. While I cannot place any dependence upon trans-illumination it does show darkening. The opening was made through the alveolus. The pain at one time was greater than it now is. I do not believe that the opening was made large enough to explore the antrum of Highmore. I believe an opening made through the canine fossa might be wise and a plastic operation then done, or else remove the antral wall entirely. Until that be done one cannot be satisfied that there is no disease in the antrum of Highmore. One then can also explore the ethmoidal cells.

Dr. Myles: At the time I saw the antrum the walls were more or less thickened with granulations and there was periosteal inflammation. I did not explore the frontal sinus. There may be possible irritation of the fifth nerve from the continued periostitis under the eye. The best way to treat this woman, in my opinion, would be to thoroughly remove the diseased tissue. The girl has a narrow nostril and it is difficult to work through it. She does complain methodically, and I would suggest a little hypnotism in her treatment. Too much surgery in the antrum is frequently one of the chief causes of trouble.

DISCUSSION ON CASE OF SCABBING IN THE NOSTRIL—DR. HARRIS' CASE.

Dr. Wright: The case looked like one of typical syphilis to me. There is certainly an infiltration of the naso-pharynx. There is a nodule on one of the turbinates which looks like a gumma. If it was not due to syphilis it must be due to some neoplastic growth. It does not look like lupus, but it does not attack the bone. As to the history given by the person I am inclined to be sceptical, and

my experience makes me give but little weight to their statements as to syphilitic disease. Syphilis does not follow any rules of evidence. However, my diagnosis is only a hypothesis. Iodide of potassium has been given for six weeks with no iodide symptoms. While we should get some results from so much iodide, it is not at all unusual for the syphilis not to yield, especially when not combined with mercury. Mercury should always be combined with iodide of potassium in tertiary syphilis.

Dr. Curtis: I agree entirely with what Dr. Wright has stated. I would suggest in the exhibition of large doses of iodide of potassium the giving of hot water. If a hot bath be given two hours after the administration of the iodide the patient can stand enormous doses of the drug. I would also suggest the rubbing in of the oleate of mercury and advise the application to the nasal membranes of one per cent unguentum Credé made up with fresh lanoline.

Dr. Myles: In these cases of incrustation the ordinary applications have but little effect. I have tried many things, including ichthyol, alkaline sprays, lactic acid in twenty-five per cent solutions and also boric acid with aristol, under which, especially when applied with friction, some conditions seem to improve better than by other methods.

Dr. Lederman: I have in mind three cases of scab formation. I gave pilocarpine in one-eighth grain doses three times a day, and the patients experienced some relief while under this treatment.

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SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

We commend to our readers the programme of this great congress, as it appears on pages x, xii and xiv of this issue (publisher's department). It will be readily appreciated how completely it covers the field of otology, how representative are the names that appear after the papers. Here are to be found the first and foremost of the workers in otology, and a few of the fathers of this branch of medicine, the immortals who rescued it from reproach, almost disrepute. For it is not longer than the present generation that otology was entirely an adjunct to ophthalmology, for practitioners who knew no further than they could see. Less was known about the ear than of any other organ of sense, than, in fact, of any other organ of equal importance in the human body. And the laity found it out. The bedside practitioner had no professional respect for the aurist. True, he carried his syringe, but when he reached the tympanum he paused, as did Cæsar, "upon the brink of the Rubicon," but unlike the Roman, he never crossed. But, thanks to these great men we now know the physiology and pathology of this most important mechanism, through which we acquire a large proportion of the

knowledge of a life-time, and can approach it in the reputable attitude of scientists, not as empirics. Otology has been elevated to the position of a great specialty, and men of learning dedicate their lives to its advancement, and are not ashamed of their calling. Here, in America, are to be found many untiring workers, and to them we urge the advantages of this International Otological Congress, where they may combine recreation with the acquirement of knowledge. There are three sides to the advantages of attendance upon such a gathering: the physical, the mental and the social. In these days of fast and cheap transit the trip can be made comfortably in a month, which is none too long a vacation from the strain of arduous practice, while the expense is no more than what would be consumed at a first-class summer resort on our own continent. To the inland practitioner the benefits from a sea voyage are especially assertive, and the change of climate, scene and associations are rest, relaxation and rejuvenation to any man wherever he may reside. For to the overworked and nerve-tired there are no drugs in his "balm of Gilead." Change of life as is found in new thoughts and new scenes is his only panacea. All else is makeshift.

Every paper that is read is offered because the writer believes that it contains new ideas and the latest thought of the entire world of otology is got at in a week. In the three years that have elapsed since the meeting of the last Congress everything that is new, or thought to be, will be presented, for it is before such a congregation of ability that discoverers prefer to advance new theories, or assert truths. The social functions incident to such a congress—official dinners, lunches, receptions, excursions, etc., into always interesting "old England," cannot fail to produce "a feast of reason and a flow of soul." Upon these occasions great men not only meet, but mix, and memories of pleasurable intercourse linger as a "joy forever."

We think that these meetings should be encouraged, for the reasons we have enumerated, and that every practitioner of otology should "strain a point" to be present. Special societies, interested in this branch of medicine, should lend their endorsement by sending delegates, and making them positions of honor, thus stimulating desire to attend. Such a course would advance knowledge, assert the importance of the work, and enkindle respect for the splendid achievements of modern otology. Realizing the importance of the work of this Congress, to our readers, *THE LARYNGOSCOPE* will be represented and a full report of the proceedings will appear in a later number.

EWING.

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

I. NOSE.

Removal of Extreme Deviations of the Cartilaginous and Osseous Septum by Resection—GEORG BÖNNINGHAUS—*Archiv für Laryngologie*, Band ix, Heft 2, 1899.

The operation recommended is somewhat complicated, and therefore should be limited to extreme cases or where the deviation is situated high up in the quadrilateral cartilage and the perpendicular lamina of the ethmoid. The technique is briefly as follows: Two incisions $\frac{3}{4}$ ctm. long are made through the mucous membrane on the convex side. The first running horizontally along the lower border of the deviation, the second perpendicular to the first and running up in front of the deviation. A slender elevator is then introduced and the mucous membrane and perichondrium are loosened and pushed up and down, leaving a space of bare cartilage. This being accomplished, the horizontal incision in the mucous membrane is prolonged and the soft tissues still further turned aside. This process is carried as far back as possible. An incision is then made through the cartilage, and the mucous membrane and perichondrium of the convex side are loosened by the elevator introduced through the opening. This incision must be carefully made so as to avoid cutting through the soft tissues, and is best accomplished by introducing the forefinger of the free hand into the concave side as a guide. In case of a sharp angle in the septum, a perforation is almost unavoidable at this stage. When the cartilage has thus been freed on both sides a strong pair of forceps is used to twist and break off small pieces, gradually proceeding backward until all the deviated portion has been removed. The author does not hesitate in this manner to remove the perpendicular lamina clear up to the cribiform plate if it is necessary. After this the loosened tissues, which were at first only pushed aside from the field of operation, are removed from the nose altogether and the operation is complete. The author does not consider that sufficient tissue has been removed unless he can see the posterior pharyngeal wall through the nostril and can get a good view of the middle turbinal.

Of course during this operation frequent sponging is necessary and renewed cocaineization at intervals. The time occupied is one-half to two hours. Bleeding is usually free at the beginning, less so as the operation progresses. It frequently happens that external deformities of the nose are corrected at the same time that the interior deviation is removed. If, however, there is any tendency to "saddle nose," it is not remedied. Very little after-treatment is necessary, and the wound has usually healed in four to eight weeks. In case a perforation is unavoidable, it need cause the operator no anxiety, for no permanent evil results follow. For a short time there is a tendency to crust formations in the opening, but this generally subsides.

Accompanying the paper is a very completely tabulated report of nineteen cases operated on in this manner. The author does not claim to have originated this operation, although he worked it out gradually himself before reading Krieg's report of twenty-three cases treated in almost identically the same way. VITUM.

II. MOUTH AND NASO-PHARYNX.

The Tonsils as a Menace to the Organism—J. R. WINSLOW—
Baltimore Med. Jour., May 13, 1899.

This paper deals with the action of the tonsils as the primary portals of entry of infectious disease into the organism. Though referring more particularly to the faucial glands, the facts deduced have a similar application to the whole of Waldeyer's lymphatic ring. Gerhardt termed the tonsils a physiological wound guarded by leucocytes, which during health protected the system against the invasion of germs.

The lymph spaces in this region are separated from external organisms by but a single layer of epithelial cells, and in many places these are loosely arranged.

Normal tonsils under normal circumstances are not supposed to absorb either fluid or solid matter. It is claimed, however, that the tonsils are only normal in infancy.

Streptococci and staphylococci are normally present in the crypts of the tonsils, but are not absorbed as long as a healthy state exists.

The author mentions the experiments and statements of various observers which tend to prove that infection occurs and frequently through these glands. Strassman's investigations have shown that tuberculosis is a common chronic infection that enters through the tonsils. The tubercle bacillus can enter the faucial tonsil and penetrate same without symptoms, and infect the cervical lymphatics.

With these views before us we must treat these glands from a broader standpoint. Not merely for the relief of conditions due to hypertrophy, for many of the tonsils under consideration were not enlarged.

The treatment should be a prophylactic one. As absorption occurs through the follicles these channels should be sealed.

The ideal operation is electro-cautery. Adenoid tissue should be radically removed.

LEDERMAN.

Carcinoma of the Tonsil—JAMES GALBRAITH COUNAL.—*British Medical Journal*, March 25, 1899.

In a woman aged 60 there was a well defined swelling about the size of a pigeon's egg at the angle of the jaw and extending up behind the ramus on the right side, the right tonsil was enlarged and its surface ulcerated, the uvula was pressed upwards and to the opposite side and the right anterior pillar and adjoining surface of the soft palate was hyperemic and swollen. There was no involvement of the tongue. It may be noted her mother died of cancer of the breast, and a brother died of a tumor on the right side of the chest at 40 years of age. A portion of the tonsil was removed and microscopical examination revealed it be a carcinomatous growth.

Contrary to what is usual in malignant diseases of the tonsil pain was not an early symptom in this case, there has been some slight difficulty in swallowing but very little pain. Patient at first refused operative treatment, but afterwards portions of the tonsil were removed, giving the patient relief.

FOX-CROFT.

IV. LARYNX AND TRACHEA.

Tuberculosis of the Larynx—F. E. SAMPSON.—*Med. Rev.*, Vol. iv, No. 5, May, 1899.

The author points out that there are cases of laryngeal tuberculosis in which the larynx presents the primary lesion, and which may continue for a time without implication of the lungs, and though they are not common, they should be recognized, since proper treatment results in a cure of the majority. He is convinced that the rules laid down for differentiation between syphilitic and tubercular ulceration of the larynx sometimes fail, and reports the case of a woman under his care that suited the description of tuberculosis in all respects, except the finding of tubercle bacilli. The patient's history and that of her husband was probed to the uttermost without finding anything suggestive of syphilis, and it was only after the woman was bedridden and dying that the use of the iodid was begun, with prompt recovery. The local and general treatment of tubercular laryngitis is clearly and sensibly outlined.

EATON.

Membranous Laryngitis with Hyperpyrexia from Malarial Poison
—C. H. WORRALL.—*Lancet*, October 29, 1898.

This is described as a case of "simple membranous" laryngitis in contradistinction to diphtheritic laryngitis. There was, however, no bacteriological examination of the membrane, and there is

not sufficient record of the absence or presence of other symptoms to help in settling the diagnosis. About twenty-four hours after relief had been obtained by a tracheotomy the temperature ran up to 108.9°. The child became unconscious and died in a few hours. There was no post-mortem. St. CLAIR THOMSON.

So-Called Autophony; i. e., The Pathological Resonance of One's Own Voice—G. BRUNNER—*Klinische Vorträge aus dem Gebiete der Otologie und Pharyngo-Rhinologie*. Band ii. Heft 3.

In this little monograph the author takes the ground that a permanently open Eustachian tube is the cause of the trouble. He opposes the views of Urbantschitsch and others who state that the phenomenon occurs in cases where the tube is open, and where it is closed, and is also caused by obstruction in the external canal.

The six cases cited certainly appear to support the author's view. In several of them the mere placing of a bougie in the tube sufficed to cut short the autophony. Some other facts he cites, such as the pulling open the tube by syphilitic scars, which have produced marked autophony.

Inasmuch as almost all of the patients were suffering from well-marked nasal catarrh, the author is inclined to think that the abnormal gaping of the Eustachian tube may have been brought about by some inflammatory condition affecting it or its surroundings. He therefore thinks that there is a catarrhal form of autophony, and that indeed it is the most common form. His method of treatment, therefore, is directed against the nasal conditions. In addition he advises the insufflation of mild dilutions 1-3 pro mille of some irritating powder like sulphate of zinc.

VILLUM.

V. EAR.

Catheter Inflation of Tympanum: Its Value and Technique—

B. ALEXANDER RANDALL, Philadelphia—*Journal Am. Med. Assn.*, May 27, 1899.

Preferably a catheter of virgin silver is to be used. A Politzer bag is recommended as the means of inflation. The catheter is passed along the floor of the nostril until its beak reaches the soft palate. "then a turn outward through a third of a circle will generally place it instantly in the mouth of the Eustachian tube. Many a case of hypertrophic or sclerotic deafness, which has been growing steadily worse under Politzer inflations and good naso-pharyngeal treatment, will hail with delight the immediately greater and more lasting gain from the catheter treatment." STEIN.

A Contribution to the Oto-Surgical Anatomy of the Temporal Bone—W. OKADE—*Archiv fuer Klin. Chirurgie*. Band lviii. Heft 4, 1899.

This monumental paper of about a hundred pages is composed for the most part of tabulated measurements of 111 skulls. The

material was obtained at the Anatomical Institute of Berlin, and consists of ordinary-shaped skulls such as one would meet in everyday practice. The conclusions obtained were as follows:

1. The author agrees with Schülzke, Randall and Garnault, who maintain, in opposition to Körner, that the anthropological form of the skull offers no trustworthy evidence as to the presence or absence of the so-called "dangerous" temporal bone. Moreover, Körner's assumptions might in certain cases lead to dangerous errors.

2. The "dangerous" temporal bone, which is characterized by the short distance between the sulcus transversus and the point of operation, occurs much more frequently on the right than on the left side; more often where the mastoid process is small than where it is large. Most important is the formation of the mastoid, the "dangerous" condition being present when the plane of the mastoid forms an angle with the axis of the external meatus.

3. This dangerous mastoid is called "Processus mastoideus infantilis" because it resembles the mastoid of the infantile temporal, which always presents a close approximation of the sulcus to the operating point.

4. To recognize a "dangerous" temporal one should always bear in mind the following points:

- a. If the operation is done on the right side.
- b. If the mastoid is very small both in its external and its perpendicular dimensions.
- c. If a processus mastoideus infantilis is present.
- d. If the patient is less than 13 years old.
- e. If the spina supra meatus leans markedly to the median side.
- f. Lastly, in the case of women the operation must be more carefully done than in the case of men.

VITTM.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Coin in the Oesophagus Removed by Aid of the Fluorescent

Screen—C. G. BURTON—*British Medical Journal*, April 1, 1899.

A girl, aged five years, swallowed a halfpenny, which was seen by the aid of the Roentgen Rays, to have lodged in the œsophagus. The X-ray tube was arranged under a bed board, which projected from the end of the table. The room was then darkened and the screen held over neck. A metal coin-catcher, which was plainly seen to pass behind the coin and hook round its lower edge, the coin being withdrawn. The interest of the case was the care with which this operation was performed, working with the fluorescent screen.

FOXCROFT.

Open Safety-Pin Removed from a Child's Esophagus—RENELL

ATKINSON—*British Medical Journal*, March 18, 1899.

A baby swallowed a brass safety-pin. On passing the finger down the esophagus the head of the pin could be felt. It was

seized with a long pair of curved forceps, but it could not be moved. The pin was tightly grasped by the forceps and the finger again passed down the gullet, disclosing the fact that the pin was open: it was then pushed down towards the stomach till the point was disengaged and withdrawn, the point being guarded by the finger.

FOXGROVE.

VII. INSTRUMENTS AND THERAPY.

On the Treatment of Chronic and Acute Diseases of the Respiratory Passages, with Guaiacol, Carbonate and Creosotal—

FRITZ HÖLSCHER—Translated from the *Tageblatt fuer den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, No. 3, May 25, 1899.

1. Affirms that the claims made for these remedies by Chaumier and himself in 1891 have been sustained by the unanimous verdict of a great number of competent observers.

2. Emphasizes necessity for careful nutrition, albuminous diet being required to compensate for the extra decomposition of albumins caused by the remedy. Appetite and digestion are not impaired, but increased by the arrest of putrefactive processes.

3. Impregnation of the body with creosote combinations renders life conditions unfavorable for the organic etiological agent of the disease; it also favors elimination of the poisonous products of tissue metamorphosis which cause the disease symptoms. Thus it has a direct action upon the causative factor of the malady. Brilliant results are claimed for creosotal in acute respiratory diseases, notably the several pneumonias. Pneumonia can be aborted if the remedy is administered early enough, and in any event its course shortened.

EWING.

On the Rapid Treatment of Pneumonia, Broncho-Pneumonia and Other Acute Diseases of the Respiratory Passages, After the Method of—CASSOULE AND CORGIER—*As Practiced in the Marseilles Hospital.*

The method consists in the continuous administration of fairly large doses of creosotal. In most cases a typical fall occurred during the first twenty-four hours: if the creosote was continued for a sufficiently long time the apyrexia was a permanent one. The temperature rose again, however, when the drug was discontinued before the auscultatory signs had disappeared. Relapses and sequelæ, so frequent under other systems, were entirely absent. Creosote being eliminated by the lungs, as proven by the odor on the breath, within an hour, the special effect is regarded as antiseptic. The milder and more recent the auscultatory signs the quicker and more pronounced is the action of the drug upon the local lung lesion. No danger from the remedy. Neither cardiac affections nor albuminuria contraindicate its use.

EWING.

BOOK REVIEWS.

Hay Fever, Its Successful Treatment. W. C. HOLLOPETER, M.D. Second edition. P. Blakeston, Son & Co., Philadelphia, 1899.

The author has produced a book of 150 pages, 144 of which are devoted to an interesting resumé of the literature of hay fever, and the dissertation upon the disease, but containing nothing new, and the other 6 (107 to 113 inclusive) advocating and directing a more thorough application of old remedies, such as Dobell's Solution, Menthol, Camphor, Hydrogen, Dioxid, the Sadrines, Albalin, etc., in different combinations. In short, the author attributes his "successful treatment" to the complete sterilization of the entire nasal cavity. He says: "The logical parallel to my methods is found in antiseptic surgery. *I scrub most carefully and gently every portion of the mucous membrane, being sure to reach between the turbinated bones, and all around, and over every slight prominence*" (italics his own). After this preliminary an application containing some of the above drugs, in oily or watery solution, is made with a hand-ball atomizer. This is the sum and substance of the new treatment that the author claims has given "complete relief" to over 200 cases treated by him.

Knowing the many idiosyncrasies of hay fever victims we confess our inability to exactly comprehend how this treatment has cured so many. These drugs have been sprayed into thousands of noses by others during the active course of the malady, with little benefit, and generally aggravating by their irritating effect. The benefit from resulting asepsis has hardly been appreciable. Furthermore, it is admitted by all bacteriologists, who have specially investigated the nasal cavity, that it cannot be completely sterilized and kept so. Again, it would seem impossible to "scrub every portion" of a nose as intumescent and stopped as some of them become with this disease, without employing a depleting drug, and the author explicitly declares that "it is very exceptional when he uses cocaine" for any purpose whatever. And even if this were possible—an accomplishment, to say the least, most difficult and tedious, considering the ramifications, cracks and crevices of the cavity—it could not but prove exciting, and even intolerable to many hypersensitive, nervous individuals.

The book is handsomely bound in blue and gold, and the paper and printing models of the bookmaker's art.

EWING.



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that they are contributed exclusively to THE LARYNGOSCOPE.)

THE OFFENDING MIDDLE TURBINAL.*

BY EDWIN PYNCHON, M.D., CHICAGO.

Professor of Rhino-Laryngology and Otology, Chicago Eye, Ear, Nose and Throat College.

Our text-books usually have but little to say regarding the middle turbinal. In a large majority of the text-books which I have consulted no particular attention is given to the middle body, all chronic enlargements of either one or both bodies being classified under the general blanket expression, "hypertrophic rhinitis," which term is furthermore frequently made to include stenosis due to septum deformities. In anterior enlargement of the middle turbinal there is often no disease thereof *per se*, it being simply an overgrowth, and the trouble produced depends solely upon the fact that it is occupying a space relatively too small for its bulk. In other cases the enlargement consists of a bony hypertrophy or hyperplasia which is rarely intensified to any material degree by hyperemia or inflammatory swelling, though, owing to its abnormally close proximity to the septum, the slightest amount of engorgement may cause contact pressure. All the turbinals should have room for physiologic engorgement. As the requirements of the middle turbinal in this respect are slight, a space of about one-sixteenth inch between it and the nasal septum is sufficient. Hypertrophy of the anterior end of the middle turbinal is sometimes complicated by the presence of some growth upon or deflection of the cartilaginous septum, or by ridges or spurs at the lower border of the perpendicular plate of the ethmoid, which may have been causative in the production of the co-existing turbinal hypertrophy.

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In a comparatively small per cent of cases the anterior enlargement of the middle turbinal consists of a polypoid degeneration, and is often associated with either nasal polypi or sinus disease. In a few cases a hyperplasia of the soft tissues is met with, described as mucoid hypertrophy by Browne, which often extends to the under surface of the turbinal. It is probably an early stage of polypoid degeneration and can be easily removed with the cold snare or destroyed by the electro-cautery.

A pronounced enlargement of the anterior end of the middle turbinal, in addition to causing an occlusion of the superior meatus and attic of the nose, may seriously obstruct the middle meatus, and in some cases may extend downward so far as to press upon or into the inferior turbinal. Obstruction of the middle and superior meatuses interfere with the ventilation and drainage of the nasal sinuses and may thus cause sinus disease just as obstruction of the opening of the Eustachian tube will cause tubal catarrh. In event of the presence of a diseased condition of any sinus no hope for improvement can be reasonably entertained until its exit is made free and unobstructed. Even if no sinus disease occurs the middle turbinal which is sufficiently enlarged to obstruct the passage of air to the nasal attic thereby impairs the ventilation and drainage of that portion of the nose, so as to prevent the normal evaporation of the nasal secretion therein, which consequently thickens and discharges into the post-nasal space, constituting a so-called post-nasal catarrh.¹ This in turn with vocalists may induce recurrent laryngitis, characterized by recurring attacks of hoarseness, and with all thus afflicted is liable to cause either catarrhal bronchitis or catarrhal gastritis, which may be succeeded by auto-toxemia as follows:

a. Chronic catarrhal bronchitis leads to an inflammatory thickening of the membrane lining the air-cells and thus, as well as through the presence of the incidental catarrhal secretion, makes more difficult the osmotic purification of the blood.

b. Catarrhal gastritis causes fermentative indigestion, with flatulence, malassimilation and constipation.²

Another effect of nasal occlusion is to cause alternate rarefaction and condensation of the air in the nose, thereby producing a general hyperemia of the whole fossa, including the connecting sinuses, and particularly of the post-nasal space. In this way Eustachian tubal catarrh may be caused which leads to aural disease. By occlusion of the attic of the nose the smell is also impaired.

Headache is often complained of in cases wherein the middle turbinal is enlarged so as to cause pressure, it being one of the most

annoying symptoms present. Roe, in a paper upon the subject of Nasal Headache,³ says: "In the nose the irritation is caused by some abnormal condition which brings together parts that normally should be separate and produces more or less pressure between them. When one wall of a nasal passage comes in contact with its opposite wall sooner or later the resulting irritation causes a sensitiveness and thickening of the tissue of the latter side. Headache when persistent is due to a constant pressure between parts that are found to be bony or composed of more or less firm tissue: while in the case of transient pains the pressure is between soft tissues, and on the subsidence of the engorgement the parts separate and the pain disappears."

Harrison Allen may also be quoted, who says in reference to nasal headache, "special stress must be laid upon the compression of the anterior end of the middle turbinated bone."⁴ As only one side is usually affected the headache is generally unilateral, being located principally upon the same side as is the enlarged turbinal, and is described by the patient as being neuralgic. There is a sameness in the character of the headache as present from time to time.⁵ Such headache is often diminished after an application of cocaine, and even after the use of a soothing, oily spray, while on the other hand it is intensified by probe pressure. The improvement after the use of cocaine gives assurance of the nasal origin of the headache. This form of headache increases with each attack of coryza and often seems to originate in or about the eye.

Of course it will be recognized that compression of the middle turbinal can be as much due to growths upon the opposing portion of the septum as to an enlargement of the turbinal itself. In an earlier paper I called attention to the presence of anterior soft hypertrophies upon the nasal septum as being causative of headache.⁶ A nasal headache is generally worse in the morning and is aggravated by physical exertion.⁷ The presence of polypi is often the cause of headache, though if both nares are thus affected the headache will generally be bilateral instead of being unilateral.

Campbell, in considering the association of obstructed nasal respiration and headache, observes that "the resulting mouth-breathing interferes with proper aeration of the blood and thus helps to induce toxic headache."⁸ Loss of memory, insomnia, mental hebetude and melancholia are among the ulterior effects due to the persistent headache, or to the auto-toxemia.

A nasal headache is sometimes observed in combination with atrophic rhinitis. More properly speaking the headache is generally

due to an enlargement of the middle turbinal while there is present an atrophic condition of the inferior turbinal. In such case, though, if proper cleansings are neglected, the retained atrophic secretions may develop an ozena or sinus disease from which the headache may also arise. In co-existing atrophy and hypertrophy the correction of the hypertrophy improves the atrophy, hence a turbinotomy operation upon a hypertrophied middle turbinal will often tend to improve an atrophy of the inferior turbinal on the same side, though the operation should be followed by several months regular after treatment of the atrophied body. In fact the restoration of the normal ventilation and drainage of the nasal attic and adjacent sinuses, in combination with the correction, so far as practical, of all existing deformities of the nasal septum, constitute a large part of the most successful line of treatment in atrophic rhinitis.

Hypertrophy of the anterior end of the middle turbinal is one of the most common causes of hay fever and asthma, and is probably a frequent factor in the cause of hydorrhoea. Cough is also frequently present and its importance as a symptom of nasal trouble has been fully investigated by John N. Mackenzie.⁹ These special neurotic manifestations are proportionate to the general neurotic tendency of the patient. The uric acid diathesis and other systemic conditions may also call for recognition.

Walsham (Nasal Obstructions, p. 72) in considering this form of turbinal enlargement, says: "The pressure exerted by the hypertrophied tissue upon the circulation within the nose is apt to cause obstruction to the return of blood from the capillaries and minute veins of the skin, thus producing erythema and acne of the nose and face. The hypertrophy may also lead to dry catarrh of the nasopharynx and pharynx (*pharyngitis sicca*), hence it is often for throat trouble rather than for nasal obstruction that patients seek relief." MacDonald gives considerable attention to middle turbinal hypertrophy and the attending train of symptoms.

Anterior hypertrophy of the middle turbinal is essentially different from a hypertrophic condition of the inferior body. The difference is observed in structure, in appearance, in symptoms, in causation, in effect and consequently a difference must follow in treatment. While the two conditions are often found associated it will not be amiss for diagnostic study to regard them separately and in tabular form as follows:

COMPARATIVE SYMPTOMS.

HYP. INF. TURB.		HYP. MID. TURB.
Rarely involved.	Bony framework.	Generally involved.
Often presents irregularity.	Nasal septum.	Generally regular.
Rarely.	Touches plane septum.	Often with pressure.
Rarely.	Occludes adjacent meatuses.	Often sup. sometimes mid.
Climatic exposures and recurrent coryzas.	Causation.	Generally congenital.
Considerably increased) Blown from ant.naris. }	Catarrhal discharge.	{ Slightly increased. { Goes to p. n. space.
Easily indents.) But slightly annoying. }	Probe pressure.	{ Rare indents. { Excites neurotic manifestations.
Rare.	History of headache.	Frequent and unilateral.
Rarely observed.	Impaired smell.	When hyp. is pronounced
Not marked.	In hay fever.	Often observed.
Rarely affected.	Vision	Often affected.

While there is an unanimity of opinion as to the advisability of doing a turbinotomy in case of polypoid degeneration or sinus disease, there has not been much active treatment extended to a middle turbinal guilty of only simple enlargement. J. A. Stucky, in *THE LARYNGOSCOPE* for April, 1897, reports several cases in which marked benefit was derived from this operation in such condition. I have likewise operated several times in cases of this nature, and with pronounced benefit to the patient. Delevan, in a paper entitled *Hypertrophy of the Osseous Structures of the Turbinated Bodies*,¹⁰ says: "Removal of the turbinated bone itself, entire or in part, is therefore essential. As to the propriety of the operation there is no reason anatomically or surgically speaking why it should not be performed." This writer next quotes Morell Mackenzie as follows: "I have myself frequently removed portions of the turbinated bones without seeing any evil result follow, and it appears to me extremely doubtful whether any bad effects could result from the removal of a portion of one of them."

The operation of turbinectomy of the inferior turbinal has been introduced by Carmalt Jones for the relief of nasal stenosis, and is too often done as a quick and easy method of providing breathing space in cases wherein the septum is at fault, the defects of which should instead be surgically corrected, thereby leaving intact the invaluable turbinal which is so essential in nasal respiration. Turbinectomy implies practically a total removal of a turbinal, while the operation of turbinotomy, being considered in this paper, implies only a partial removal of the middle turbinal, primarily to restore the normal ventilation and drainage of the nose, and incidentally to correct both contact and pressure which are so productive of nasal reflexes.

In paper previously cited Harrison Allen says: "The treatment

of nasal headache is in no way modified from that which I have advocated for the treatment of chronic nasal catarrh. The diseased structures must be removed thoroughly and as rapidly as is consistent with all the facts and in obedience to the general principles of surgery."

In two excellent papers Snow (¹¹ and ¹²) emphasizes the necessity of surgically obliterating all points of intra-nasal pressure. He thinks "that from 70 to 80 per cent of all cases of headache of hemi-cranial order are due to removable causes located within the nasal passages or adjacent air spaces." While this paper is addressed particularly to conditions of enlargement of the middle turbinal, the treatment in all cases should of course extend to all other pathologic processes found in the nose or naso-pharynx with the object of causing those parts to assume, as nearly as possible, the form and character of the ideal standard.¹

Not being satisfied with the method usually adopted of biting off piece after piece with some form of snipping forceps, with the assistance of shears and snare, thereby making a rough and uneven stump, I devised the following method of operating. In simple anterior hypertrophy of the middle turbinal the form may consist of either too large a thin scroll, or the scroll may be of usual length and of too great thickness. While the first form impinges upon the lumen of the middle meatus, as well as upon the septum, and often occludes the superior meatus, the latter form leaves a free middle meatus and only presses against the septum, though the contact may be of sufficient extent to practically occlude the anterior opening of the attic.

My method of procedure consists in first using the guarded trephine shown in figure 1, which is operated by an electric motor. This trephine differs from previously used forms inasmuch as the guard is



Fig. 1. Guarded Trephine. ($\frac{2}{3}$ size.)

provided with a flat and very thin guide which projects one-fourth inch or more beyond the point of the trephine, and serves first, as a means of entering the narrowest space required; second, as a director to guide the trephine; and third, as a guard to prevent too deep entrance, or injury of parts which should not be touched. The shank

of this attachment is also one inch longer than is the shank of the style in general use. With this instrument, after elevating the tip of the nose, I make a horizontal groove in the turbinal, as shown in figures 2 and 3, figure 3 being a vertical cross-section of figure 2 at the dotted line *a b*.

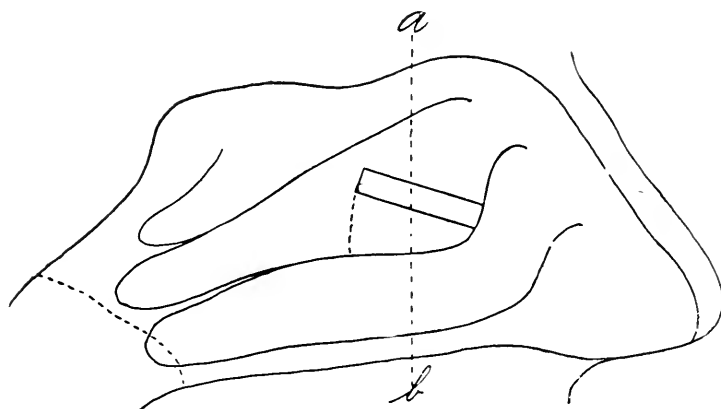


Fig. 2.

In these figures the anterior end of the left middle turbinal is shown abnormally large. The core produced by the trephine is about three-quarters of an inch in length and is detached by giving a slight up and down motion at the distal end of the instrument after the tre-

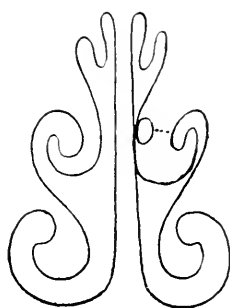


Fig. 3.

phine has entered as far as it will go. These up and down motions should be repeated two or three times while the revolution of the trephine is still being continued by the electric motor. In my early cases of the second form described I allowed the operation to stop at this

point, trusting to cicatricial contraction in order that a slight space should be provided between the turbinal and the septum. While some improvement was secured the results were not so favorable as in later cases wherein I continued the operation by next introducing one blade of an Ingal's nasal shears in the hole made by the trephine, and the other blade beneath the turbinal in the middle meatus. (See dotted line in figure 3.) In this way a section is easily made which is afterwards removed with a cold snare, the same as is a polypus, by pressing the loop as far backward and upward as it can be made to go. (See dotted line in figure 2). Thus a good-sized piece is quickly removed with but little pain under 20 per cent cocaine anesthesia, and the resulting wound is smooth and quite even. The hemorrhage has been slight.

In the process of healing some shrinkage of the untouched portion takes place, and at the same time granulations are thrown out upon the operated portion, so a new end is created, which becomes so well formed as, at a later date, to often deceive the examiner, and cause him to doubt that such operation has been done. The guarded trephine I employ is of course equally as serviceable in operating upon a growth upon the septum as in operating upon a turbinal, in which case the guard effectually protects the adjacent turbinal against injury.

Columbus Memorial Building.

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FIBRINOUS RHINITIS.*

BY D. J. GIBB, WISHART, M.D., TORONTO, CANADA.

Professor of Laryngology, Trinity Medical College.

The occurrence during last summer and fall of a series of cases, which apparently were fair examples of what has been described as fibrinous rhinitis, and certainly were the first to fall under my own notice, and a desire thereby to add a little if possible to the small amount of knowledge we possess upon this interesting subject leads me to present this paper.

Fibrinous rhinitis is an affection described under a variety of names—such as membranous rhinitis, croupous rhinitis, pseudo-membranous rhinitis, streptococcic rhinitis, laminated fibrino-plastic rhinitis, and by Bretonneau and other writers in France, as *Coryza Couenneux*. It was first mentioned about twenty-six years ago by Henock. The best description of the disease that I can find in the most recent text-books is that contained in Walsham's¹ "Nasal Obstruction." It is as follows: "The nasal cavities are obstructed by false membranes of a grayish-white color and fibrinous consistency, adhering to the swollen and reddened mucous membrane, especially that covering the septum and turbinal bones. The false membrane adheres more or less firmly and leaves a bleeding surface when forcibly removed, or it may come away easily without any bleeding. Cocaine does not cause a shrinking of the swelling; no membrane is discovered in the fauces. The glands in the neck are not enlarged, and no constitutional symptoms are present. The patient is most likely a child. It usually begins without apparent cause as an ordinary cold in the head, and may be ushered in by headache and slight fever, which, however, quickly subside. The urine is not albuminous, and the disease abates in a couple of weeks, and is not followed by paralysis."

The last extensive paper upon this subject in American and Canadian literature is that of Ravenel², of Philadelphia, published in 1895, wherein he collects reports of seventy-seven cases. As a result of these observations, Ravenel drew the conclusion that "patients suffering from fibrinous rhinitis were always a possible source of contagion, and should be isolated as carefully as those affected with the more common types of diphtheria."

* Read before the Ontario Medical Association, Toronto, June, 1899.

I find, however, that such eminent authorities as Bosworth in America, and Lennox Browne and Walsham in England, express themselves in their recent publications to the effect, that fibrinous rhinitis is a benign disease distinct from diphtheria. It is true that Bosworth states that all these cases should be isolated, but where is the need of isolation, with all that is implied thereby, if the disease be benign. Bosworth³ states that "croupous or fibrinous rhinitis is characterized by a deposit of fibrinous exudation, which is superimposed upon the epithelial layer, and does not involve the deeper tissues. The disease undoubtedly is frequently caused by, or follows operations in the nose, as after the galvano-cautery. In children the exudate forms a soft, thick almost granular mass, very friable, which in some cases can almost be wiped from the mucous membrane in small fragments. The treatment appropriate to diphtheritic cases is most often used with benefit in these cases. The patient should be isolated at once."

Walsham⁴ says: "Fibrinous rhinitis is rare. The affection is sporadic, and not contagious. In bacteriological examinations, the Klebs-Löffler bacillus is not found, but the staphylococcus pyogenes aureus, or a staphylococcus resembling this organism may be present. By some observers fibrinous rhinitis is believed to be merely a mild form of nasal diphtheria, since in some supposed cases of the affection the Klebs-Löffler bacillus has been discovered in the membrane. It is possible that these particular cases were mild forms of nasal diphtheria, fibrinous rhinitis being a benign disease distinct from diphtheria."

Lennox Browne⁵ says: "Recognizing there is such a disease as diphtherial rhinitis, there is also a form of nasal inflammation characterized by exudation of membrane which, although probably bacterial in its nature, holds a subsidiary position in pathology analogous to that of non-bacillary-membranous laryngitis. Risk of contagion is remote. Cultivation and inoculation experiments give negative results. The neighboring glands are not involved and no one has found the Klebs-Löffler bacillus."

On the other hand, Haviland Hall⁶ in "Albutt's System of Medicine," says: "In the majority of cases the disease is the result of diphtheritic infection, and in some the general symptoms are so slight that the true nature of the disease is likely to be overlooked. It is only after a careful bacteriological investigation with a negative result, that the possibility of any cause other than diphtheria should be admitted, and until such examination is made the patient should be isolated. In the non-diphtheritic cases have been found a coccus

resembling the staphylococcus pyogenes aureus, but differing from it by its extraordinarily quick growth, and by the duration of its power of infection, the streptococcus aureus and the pneumococcus membranous rhinitis occasionally occurs in the new born infant, usually in connection with septicemia in the mother."

Here then we have very opposite views expressed by leading authorities upon a subject of great importance, namely, the contagiousness of one form of a disease, which is looked upon with dread by physician and community. All of the cases which I here record occurred within a period of about fourteen months, and must be considered in my opinion simply as cases of diphtheria, where the type was of an unusually mild character. These cases are as follows:

Case I. Occurred in the writer's family. On July 17th, 1898, M. W., aged six years, complained of stuffiness of the left nostril in the evening, but was quite well and slept soundly and was not examined till the day following. The left nasal chamber was then found completely filled from front to back with a grayish-whitish fibrinous semi-transparent membrane. It was removed entire by injecting cocaine beneath it and by the use of a probe. The membrane was attached to the septum anteriorly and to the inferior, and perhaps to the middle turbinated bones as far back as the posterior nares, and when removed left a slightly bleeding surface. The throat showed no signs of membrane except two faint white lines behind the right posterior faucial pillar. The pulse was 76 and the temperature normal. After the removal of the membrane finely powdered iodoform was dusted on to the surface. The membrane was examined the same day by Professor Anderson, who found numerous polynuclear leucocytes with fibrin, but no bacteria. Cultures were also made, which showed abundance of staphylococcus albus, but nothing else. The membrane did not reform to any appreciable extent, and did not invade other parts. Iodoform was blown in daily, the child was not isolated and was not ill in any way, and the nose was healed in about a week.

M. E. W., aged five years, sister of No. 1, was examined accidentally on the evening of the 29th of July, 1898, twelve days following the above, and a membrane was observed on the posterior wall of the pharynx: which was examined also by Professor Anderson. Culture proved this to contain Klebs-Löffler bacilli. She was isolated and antitoxin promptly administered. The glands were slightly enlarged and there was a slight extension of the membrane. Recovery ensued within a week. No paralysis followed, but the anemia was

very marked. The nose was not involved. Neither of these children were exposed to contagion in any known way and no other members of the family were affected.

Case II. August 25, 1898. H. W., aged nine years, was brought to the office by her mother who stated that she was not sick, but that she complained of some stuffiness of the nose, which she thought might be a return of adenoids for which an operation had been performed in May. On inquiry it was found that she had had a sore throat about ten days earlier, which had been pronounced by a physician non-diphtheritic, and from which she had recovered. The one side of the nose was found completely blocked with a membrane similar to that described in No. 1. Removal left a bleeding surface. The child was promptly referred to the Isolation Hospital, and the Klebs-Löffler bacilli were found. The membrane spread out to the pharynx. Recovery ensued, but over six weeks passed before the bacilli disappeared.

Case III. In the early part of 1898. M., an infant of a few days old was referred to me by Dr. McMahon. The child was found to have difficulty in nursing, as its nose seemed to be blocked. On examination I found one side of the nose filled by a fibrinous membrane. The membrane was examined at the health office, and the Klebs-Löffler bacillus found. There was an extension of the membrane and no other symptoms of diphtheria were observed.

Case IV. H. R., boy aged five, in the practice of Dr. Fotheringham, developed a choked nose in November, 1898. The nasal chamber was completely occluded by a whitish membrane. The Klebs-Löffler bacillus was found in abundance. The membrane remained present for fourteen days, and the bacillus was found on each of the several examinations.

There was no clinical evidence of diphtheria at any time, and there was no extension of the membrane. The remaining residents of the house, father, mother and maid each developed typical pharyngeal diphtheria with all the clinical symptoms, the maid's case being of a severe type with faucial paralysis and a peripheral neuritis of the anterior tibials following.

The following cases occurred in my practice in the Hospital for Sick Children:

Case V. F. J., aged nine, was operated upon in September, 1898, for deflected septum. On the fourth day thereafter one nostril was occluded by a fibrinous membrane. Bacteriological examination showed the presence of staphylococci and the Klebs-Löffler bacillus. The child was isolated for nine days and there was no extension of the membrane, and no delay in the healing of the wound.

Case IV. W. R. C., aged four, was admitted in February, 1898, for anemia and epistaxis. The child proved to be hemophylic. Some months after admission both nostrils were found to contain a fibrinous membrane, which on removal left a bleeding surface. This membrane recurred persistently, and its presence was attended by attacks of epistaxis. Repeated bacteriological examinations were made, but no Klebs-Löffler bacilli were ever found. The child was not isolated, the membrane was removed, and various powders, styptic and anti-septic, were applied. The membrane finally disappeared, and the child was discharged in the following September.

Case VII. H. P., boy aged ten, entered the Hospital for Bell's paralysis on December 30, 1898. On the 27th of January his nose was observed to be sore and bleeding, and high up in the right chamber a whitish membrane was discovered. This was found to contain staphylococci only, no other symptoms were observed and the patient was discharged on the 9th of February.

As will be seen these seven cases give examples of a benign membrane in two cases, and of a membrane containing Klebs-Löffler bacilli in five cases. Again in two cases, one of them with a benign membrane there is a clear history of the infection of these brought into contact with the patient. The appearance of the membrane varied, being grayish and viscid in No. 1 and white and somewhat friable in No. 6. In no case could the membrane be removed without leaving some slight bleeding point, and in no case except in No. 6 was the bleeding very marked. In case No. 1 the membrane was the most typical I ever saw, and careful examination proved nothing to be present but staphylococcus and yet the only child with which she was brought into contact, developed pharyngeal diphtheria. In case No. 3, which was examined by a very accurate observer, the membrane was typical, constitutional symptoms were absent, and yet the patient spread true diphtheria to three persons. Of the hospital cases, only one was isolated, diphtheria, however, was epidemic in the hospital in the summer of 1898, and an occasional case appeared in the wards throughout the winter. The greatest watchfulness being required to prevent an outbreak. These two cases, therefore, would appear to have suffered from fibrinous rhinitis, owing to their exposure to diphtheritic contagion. I have already presented the views of our leading authorities, and now present as full a list as I have been able to obtain of cases recorded since 1895, of which there are ninety-one, making with my own a total of ninety-eight cases.

F. J. Dixon⁷ reports two cases, in one of which cultures showed micrococcus albus liquefaciens, and bacillus termo of Vignal but no others.

Hennig⁸ reports eighteen cases, which are fairly typical, and after a careful comparison concludes, that fibrinous rhinitis is not a disease *sui generis*, but is intimately related in a clinical and pathologico-anatomical manner to diphtheria. That its etiology is obscure, but that it is not due to Löffler's bacillus.

H. Lambert Lack⁹ reports thirty-six cases, forming two and a half per cent of all the children attending hospital practice. The results of bacteriological examinations carried out in thirty-three cases showed the true Klebs-Löffler bacillus constantly present, generally in pure culture, sometimes mixed with pyogenic cocci. It was usually of the large variety, and its identity was proved by its morphology, by its growth in various culture media. It was shown to be of full virulence in animals, to produce virulent toxins, and to be neutralized by anti-toxins, to live for several months in culture media, and by its vigorous growth to crowd out other organisms if present. A thorough examination proved a previous history of diphtheria in connection with one case only. The disease gave rise to itself in nine cases in four families, and often to mild sore throat, twenty-five cases out of eleven families.

John Middlemass Hunt¹⁰ reports three cases presenting the clinical characters of fibrinous rhinitis, but all of them so related to diphtheria as to make him thoroughly distrust any case based on clinical evidence alone. In two of these there was a bleeding surface left after removal of the membrane. In two cases true pharyngeal diphtheria occurred among those associated with the patient, and the other case developed a severe attack of diphtheria two weeks later followed by extensive paralysis. The Klebs-Löffler bacillus was found in the only case submitted to bacteriological examination.

Richard Lake¹¹ reports one case with a white gelatinous mass, filling entirely the cleft between the septum and the inferior turbinate bone. Bacteriologically no organisms but *staphylococcus pyogenes aureus* were found. The case was lost sight of before a cure was affected.

Price Brown¹² reports one case with a large white patch of cartilage-like membrane filling the whole cavity and adherent to the septum. It had been noticed by the patient for about two weeks. On removal it left a more or less abraded surface. There were no indications of diphtheria. The membrane was made up of fibrin and leucocytes. No bacteriological examination was made.

Meyer¹³ reports twenty-two cases in which he had made bacteriological examinations with inoculation experiments, and found in nine cases streptococci only, and in the thirteen others the Löffler bacillus in virulent form. In their clinical course the cases with diphtheria bacilli showed no difference from those without.

Gerber¹⁴ reports seven cases where virulent diphtheria bacilli were found. In other cases, the number not being given, streptococci, staphylococci, diplococci, etc., were found without the Klebs-Löffler bacillus. Gerber considers that the clinical pictures may be identical while the diseases are different, and that the difference between this and true diphtheria is one of degree only, dependent upon the vulnerability of the mucous membrane.

Gerber and Podack¹⁵ report five cases of primary fibrinous rhinitis in which the virulent Klebs-Löffler bacilli were present. They emphasize the great danger of infection in these cases on account of the relatively slight symptoms, and the chronic course, and insist on strict isolation.

Pluder¹⁶ reports six cases of rhinitis fibrinosa diphtherica, of which five were examined bacteriologically. Klebs-Löffler bacilli were found in all, while in one case there occurred extension to the pharynx—pharyngeal diphtheria—and more or less diphtheritic severe sore throat in persons in contact with the patient. He considers that but for the fact that there is no known case of fibrinous rhinitis which has been followed by paralysis, the diseases might be considered as identical.

In this series of cases we have the Klebs-Löffler bacillus present in sixty-nine out of a total of ninety-eight cases. These are not the observations of one man, but of a number, and most of the cases bear the ear-marks of careful observation. Looked at from the point of view of these results are not the conclusions of Ravenel in 1895 amply borne out. The cases of fibrinous rhinitis are rare, and the general practitioner who meets with a case will look up the subject in one of the recognized authorities, and acting upon their conclusions, will be apt to leave the case without isolation. This is too dangerous for the community and not justified by what we now know of the disease.

With regard to the frequency with which this form of disease appears, I feel convinced that the observations of Potter and Lambert Lack are not borne out in the experience of others. In my own case, in an experience of six years in charge of an intern and extern nose and throat clinic in the Hospital for Sick Children, not one case of fibrinous rhinitis was observed till those above recorded appeared. This long experience without a case and then the sudden appearance of a comparatively large number only goes to prove in my mind that fibrinous rhinitis is but one of the forms or phases of diphtheria due to an attenuation of the bacillus. It is assumed by some observers that the membrane which is now and then found in the nose after operative procedures is identical with that found in fibrinous rhinitis.

To this I would demur. The appearance is not at all the same. The history of the case in itself is a guide if the physician has occasion to suspect the nature of the deposit present. I have in many instances observed this membrane-like eschar after the galvano cautery.

It would appear that observers of this interesting disease thus fall readily into three classes:

1. Those who consider diphtheria and fibrinous rhinitis to be distinct diseases.
2. Those who consider there is but one disease, but that the degree of contagiousness varies, so that we may safely neglect to isolate such cases where no clinical and bacteriological evidences of diphtheria are to be found.
3. Those who would isolate every case.

In view of the fact that cases possessing a membrane bacteriologically innocent have apparently communicated diphtheria to others, are we not warranted in thinking that the Klebs-Löffler bacilli were really present somewhere. If so, we are forbidden thereby to abandon the isolation of these cases until a series of bacteriological examinations have been made, which practically means until the disease itself has disappeared.

In conclusion, we may fairly consider that the accumulated evidence proves the following points:

1. Fibrinous rhinitis and diphtheria are not distinct diseases.
2. All cases of fibrinous rhinitis need the same precautions as to isolation that diphtheria requires.

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NOTE. Subsequent to the reading of this paper, the writer has received a copy of "Non-Diphtheritic Pseudo-Membranous Rhinitis," by Dr. Price Brown, in which the views expressed are at direct variance with the conclusions of my paper.

ACUTE SEPTIC RHINITIS OF CHILDHOOD.

BY LEWIS S. SOMERS, M.D., PHILADELPHIA, PA.

Various classifications of the acute inflammatory affections of the nasal mucosa have been made, but that devised by Tissier¹ presents the most valuable features, being based on causal factors. He divides acute inflammations into three classes: first, simple rhinitis due to atmospheric changes; second, membranous rhinitis, due to streptococci, while the third class is characterized by the formation of pus and designated as purulent or septic rhinitis, which he says is probably due to the gonococcus. Septic rhinitis occurring a short time after birth in a few cases, may be due to gonorrheal infection from the vaginal tract of the mother, but in this country at least, the majority of cases result from the implantation of the ordinary pus organisms and rarely from specific infection.

The following case is typical and illustrates the chief features of the disease: W. M., male, aged four years, was first seen on July 31st, 1897, with a history of purulent discharge from the nostrils of but a few days duration and soreness of the nose and upper lip. His mother stated that he had been well from babyhood until the present time, with the exception of pertussis during the past winter, but which had entirely disappeared. Without apparent cause his nose felt "full" and there was a muco-purulent discharge, rapidly increasing in amount, then becoming profuse and purulent and vesicles appeared on the upper lip, from the irritating secretion flowing over it. The lip and nasal vestibule were covered with small pustules and vesicles, while examination of the nasal chambers revealed the presence of a large amount of yellow pus, covering the anterior two-thirds of the turbinal tissue and septum and extending from the floor to the middle portion of the olfactory region. The epithelial investiture of both septum, inferior, and middle turbinals, was necrosed in part and of a white color, in contradistinction to the inflamed area adjacent. There was effusion of serum into the deeper tissue layers and the mucous membrane of the floor and dependent portion of the turbinals, presented a "boggy" appearance.

The condition, to a great extent, resembled a violent form of rose coryza, but with greater destruction of tissue and the discharge of purulent matter, instead of serum as in the latter affection. There was also phlyctenular conjunctivitis, dependent upon the nasal inflam-

mation. Constitutional symptoms were not well marked; partial dyspnea from nasal obstruction being most prominent and there was slight elevation of temperature; the general symptoms bearing no relation to the severity of the nasal condition. The parts were cleansed with an alkaline, antiseptic solution, then with dilute peroxide of hydrogen and the nose sprayed several times daily with the alkaline solution, to which was added a small amount of carbolic acid. This was used for two weeks when the affection disappeared, and except for the conjunctivitis, there were no further complications.

Infantile purulent rhinitis, especially among the lower classes, is frequently of syphilitic origin, while in older children many factors may be concerned in the etiology, and although the cause may differ in various cases, the pathological changes are constant, varying only with the intensity of the inflammatory reaction and extent of pus producing surface. Insanitary surroundings play a prominent part in the etiology, as the affection is rarely seen in children with good hygienic environment, but occurs most frequently among the neglected children of the lower classes. Traumatism, such as a blow on the nose or the inhalation of irritating vapor, will also produce the disease, but only when tissue destruction results or impairment of local vitality occurs to such an extent that infection can take place. In all cases, staphylococci or streptococci are found, and while other organisms may be associated, yet they influence the affection only to the extent of producing further complications. Occasionally septic rhinitis may follow the acute infectious diseases, such as scarlet fever, etc., especially when convalescence is prolonged and the constitution broken down by the effects of the primary disorder, and more rarely it may be due to exaggerated coryza, or simple catarrh, when the latter is of unusual severity or long continued. Foucheray² reports a case in an infant, thirteen months old, in which bacteriological examination revealed the presence of the staphylococcus albus and aureus; the affection disappearing by the use of 10 per cent mentholated oil sprayed into the nares and pharynx several times daily.

The symptoms are both local and general, the former varying with the extent of the inflammation, which as a general rule is limited to the mucous membrane and does not involve the deeper tissues. The symptoms resemble to a certain extent a severe attack of coryza, the membrane is inflamed with loss of the epithelial cells in limited areas, the turbinal tissue and septum are alike affected and the dependent parts are swollen from excessive outpouring of serum, causing local areas of edema. The lip and ali nasi are irritated

from the discharge and may be inflamed, eroded or covered with vesicles and pustules. The discharge, while at first serous, rapidly becomes purulent, and at the end of the first day is produced in considerable amount and becomes fetid and greenish-yellow in color. These symptoms last from five to six days, then cease when appropriate medication has been applied, to be replaced for a few days longer with moderate mucous secretion. When the affection occurs in children recovering from exhausting illness it may vary in the symptom complex from that described, and instead of the purulent discharge ceasing by the first or second week it assumes a subacute form, lasting for several months. The general symptomatology amounts usually to a moderate elevation of temperature, increase of pulse rate, with frontal headache and anorexia. When the turbinal swelling becomes excessive, with consequent pressure on the septum, aprosopia occurs: the child becomes dull and unable to concentrate his attention on any definite subject, this, however, lasts only during the few days when congestion is marked.

The history of the rapid onset, the result of an objective examination and the presence of a bilateral profuse, purulent discharge renders the diagnosis comparatively easy in the majority of cases. Of major import, however, is the differential diagnosis from other affections which may simulate septic rhinitis: the more prominent being nasal diphtheria, membranous rhinitis not dependent upon the Klebs-Löffler bacillus, syphilis and a foreign body or rhinolith. Nasal diphtheria may exist independent of any other evidence of this disease in the upper respiratory tract and without constitutional symptoms. Subjectively resembling septic rhinitis by the presence of bilateral muco-purulent discharge with excoriated lip and nasal alæ and more or less marked nasal obstruction. The chief points in making the differential diagnosis are, that in diphtheria the nasal discharge is less, is not bright yellow in color, but contains mucus and shreds of false membrane. Objectively, the mucosa and especially that lining the floor, is covered with membrane which is not removed by spraying, but requires considerable force to be detached from the underlying mucosa. Of still greater importance in correctly estimating the nature of the affection, is the bacterial examination, the presence or absence of the specific organisms, determining in conjunction with the other symptoms, the character of the affection.

True membranous rhinitis, non-diphtheritic in character, may be mistaken for septic rhinitis, should the secretions of the former become profuse and purulent, but usually they are scanty and mucoid:

nasal examination clearing up any doubts that may exist. Hereditary syphilis involving the nares and presenting little evidence of the disease elsewhere, is especially liable to be confounded with other forms of nasal suppuration. In the former affection it will be found that the discharge is of long duration, there is considerable odor and greater destruction of tissue than occurs in septic rhinitis. It is also very infrequent in syphilis not to find some other evidence of the affection and the symptom-complex, with the parental history will enable one to make a correct diagnosis. Purulent rhinitis may be consequent upon the presence of a foreign body or rhinolith in the nose. In all cases of nasal suppuration a thorough examination should be made to eliminate the presence of a foreign body, and as the majority of the cases of the latter exist on but one side, its presence can be readily determined.

The ultimate outcome of the suppurative process is very favorable if promptly treated, but in neglected cases complications occur and even "death from pyemia"³ results or a serious form of septicemia ensues, followed by long and tedious convalescence.

The treatment should be directed to the improvement of the general condition, the restoration of the patency of the nasal chambers and antisepsis. Tonics and alteratives as best suited to the individual case and the removal of the cause as far as ascertainable should be advised: if syphilis be suspected, mercury should be used, while in nearly all cases the child improves by the use of syrup of the iodide of iron. The nose and throat should be sprayed with an alkaline, antiseptic solution, then with dilute hydrogen peroxide, until all pus has been removed. The parts are then covered with a spray of mentholated oil (1 to 2 per cent), or an ointment composed of yellow oxide of mercury (1 grain to the ounce of lanoline) and not disturbed for several hours, when the child should at frequent intervals use the alkaline solution, to which has been added one grain of carbolic acid to four ounces.

Dedieu⁴ has been successful in treating this affection by irrigating the nasal chambers twice daily with a tepid solution of boric acid, 5 per cent, resorcin $\frac{1}{2}$ to 1 per cent, and permanganate of potassium 1:1000. The patient uses a syphon, bends forward and breathes with the mouth open. In connection with this he uses an ointment composed of boric acid ten parts and vaseline fifty parts, a small amount of which is placed in the nostril four or five times daily, and when the purulent discharge has ceased the nose is sprayed with a $\frac{1}{2}$ per cent solution of nitrate of silver. Although this treatment will be productive of fair results generally, yet it is dangerous to

use irrigation in any suppurative nasal condition, the liability of aural infection being so great that it is far better to spray the nose.

When nasal obstruction is persistent and prevents the child feeding, it becomes important that the patency of the nasal chambers be obtained and kept so. This is best done by painting the turbinals with a 1 to 2 per cent cocaine solution, to be followed with a $\frac{1}{2}$ per cent solution of antipyrine. A small amount of cocaine must be used and applied only to the areas of greatest enlargement, as serious consequences may follow the use of solutions of greater strength.

3554 North Broad Street.

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Nasal Bacteria; The Relation they Bear to Disease—D. BRADEN

KYLE—*Journ. Am. Med. Assn.*, June 10, 1899.

In the examination of a great number of cases bacteria were found both in the cases of rhinitis and in those having apparently normal nasal mucous membrane.

The greatest number of germs were found in the cases of atrophic rhinitis. The bacteria varied according to the surroundings of the individual.

The bacillus of tuberculosis was found on healthy nasal mucous membrane after the individual had been on the dusty street. The bacillus of diphtheria was found after the individual had passed through the diphtheritic ward of a hospital.

In speaking of the various forms of catarrhal inflammation the author concludes that bacteria have an important relation to the inflammatory conditions present, but that their etiological relation is secondary and not causal, and that before the bacteria found access to the mucous membrane there was some alteration in the epithelial surface brought about either by external or internal irritants, which lowered the physiological resistance of the individual cells.

ANDREWS.

PARASITIC AFFECTIONS OF THE PHARYNX.*

BY ELLET ORRIN SISSON, M.D., KEOKUK, IOWA.

Pharyngomycosis, while not considered a common affection, has been of late years more generally observed, the reason for this probably lying in our increased facilities for making a diagnosis in suspected cases. Reports from the dispensaries of our large cities, New York in particular, show a large number of such cases. The investigations of V. Jaksch¹ go to prove that mould and yeast-fungi are very seldom seen in this locality in health; when they occur it is an accidental constituent, probably introduced with the food. In disease, however, their presence is frequent. Fission-fungi, on the other hand, are met with in great number and variety in the healthy saliva. Miller² has cultivated over fifty different fungi obtained from the mouth. Benign mycotic affections of the oral and pharyngeal cavities have been well studied under the microscope and can be conveniently classified as follows: Thrush caused by *Oidium albicans*, *nigrities lingue* (black tongue), *mycosis sarcinica* and *aspergillina*, and *mycosis* due to yeast and *leptothrix*.

In *nigrities lingue* the tongue is covered with black deposits, which are cast off as readily as they reform. Dessois³ believes it to be caused by *glossophyton*. Sell⁴ and Dahl could not place the parasite among any class. Klebs calls it *penicillium microscoparium*. Schmiegelow's⁵ black fungi are *hyphomycetes*, not identical with those of Ciaglinsky and Hewelke,⁶ consisting of *mucor niger* and those of Sendziak,⁷ resembling *aspergilli*.

Mycosis sarcinica was first described in 1846 by Virchow,⁸ and later by Nauwerck⁹ and Fischer.¹⁰ *Mycosis aspergillina*, comparatively frequent in the external auditory meatus, is exceedingly rare in the throat. Schubert¹¹ has given an interesting account of its occurrence in the naso-pharynx. Siebenmann¹² found there *aspergillus fumigatus* and *nidulans*, and *mucor corymbifer*. John N. Mackenzie¹³ and Zarniko¹⁴ found *aspergillus* in the antrum of Highmore.

Mycosis of the tongue, produced by yeast, has been observed in a new-born girl by Parak,¹⁵ later by Troisier and Acharme¹⁶ after typhoid fever, and lately by J. Herzfeld,¹⁷ in one case after influenza-pneumonia and in another in a girl aged twenty years.

* Presented to the Section on Laryngology and Otology at the regular annual meeting of the American Medical Association, Columbus, Ohio, June, 1899.

Thrush, as it is commonly called, and mycosis leptothricia are the two forms most frequently met with. Thrush, as is well known, occurs most frequently in children, but is common also in adults, especially in association with tuberculosis. Freudenberg¹⁸ has detected it in healthy persons. The out-set of the disease is marked by the formation of white patches on the mucous membrane, and, when examined microscopically, these patches are seen to enclose sharp-bordered oval cells, each having one or two nuclei. The cells are disposed in groups of two or three. Later on an examination of these patches shows them to consist of epithelial cells, leucocytes and debris, amongst which the parasite appears as branching, ribbon-like forms composed of long segments. Each segment usually contains two strongly refractive nuclei embedded in a clear substance, one at either end. The segments vary in length, and grow shorter toward the extremities of the parasite. They are for the most part homogeneous, but occasionally finely granular. There are also to be seen oval bodies, which are thought to be the spores (gonidia) of the fungus. There is still much dispute as to the place of the thrush fungus in the vegetable kingdom. Rees¹⁹ refers it to the yeast fungi; Grawitz²⁰ supposes it to be identical with the fungus studied by Cienkowski, and Plaut²¹ opposes this view, regarding it (with the above named author, and also Baginsky²² and Klemperer²³) as a yeast-fungus.²⁴ According to the more recent investigations of Plaut²⁵ the thrush fungus is identical with the widely distributed *Monilia candida*. The observations of Langerhans,²⁶ and more recently of Charrin and Ostrowsky,²⁷ give reason for belief that this parasite, though generally innocuous, may also in the human subject be an agent in suppuration. The fungus can be easily examined by placing part of the loose membrane with a little glycerine under the microscope.

The second form of pharyngeal inflammation is produced by the *leptothrix buccalis*. This fungus was first discovered by Leuwenhœk in 1695, and was subsequently, with other fungi of the mouth, investigated by Bühlmann, Henle, Robin and Hallier. It appears as large, twisted, thread-like organisms, in which segments can be demonstrated with difficulty or not at all. Apparently different organisms have been described under this name. Vignal claims to have cultivated a *leptothrix buccalis*. Miller²⁸ recognizes two principal species, neither of which could be cultivated—*leptothrix innominata*, which shows no transverse divisions, and which is stained faintly yellow by iodine; and *bacillus buccalis maximus*, in which the transverse divisions are distinct, and which is stained brownish violet by iodine.

Rasmussen²⁹ has developed, by spreading human phlegm of healthy individuals upon potatoes and nutrient gelatin, three different kinds of leptothrix, which he cultivated in sterilized nutrient fluid, whereby he believed himself to have proved the generic connection between bacilli and cocci. Jacobsohn³⁰ has made successful culture experiments with leptothrix fungi taken from patients affected with the mycosis. According to Taepfritz, Van der Poel and Miles the disease appears to be more frequent in women than in men. Of the dozen cases mentioned by Ingals³¹ about one-half were men and one-half women. Guinier thinks that lymphatism is a good condition for the development of the mycosis, but, on the contrary, it is observed that most of the patients belong to the wealthy class of people, among whom hygiene is at its highest. It occurs with predilection between the twenty-eighth and thirty-fifth years, and has also been observed between the twelfth and sixty-second years of age. The symptoms of these two chief varieties of pharyngeal mycosis are largely objective. Thrush being usually ushered in with some febrile disturbance and gastro-intestinal irritation, such as sickness, diarrhœa, abdominal pain and tenderness. An inspection of the pharynx, as previously stated, reveals the presence of circular spots about the size of a pin's head, slightly elevated and of a white color. If the course of the disease be unchecked, the spots gradually coalesce until, in some cases, the entire mucous membrane is covered with patches of a whitish color. Thorner³² records a case in which he was able to watch the gradual extension of the fungus from the pharynx to the naso-pharynx and thence into the nostrils. Mycosis leptothricia may be attended by a sensation of dryness and of irritation in the fauces, uneasiness or pain during deglutition, a sensation of tickling, of a string around the neck, of a foreign body in the throat, accompanied with coughs and scraping sensation. Thomas has observed cases with fever and loss of appetite. The fetid breath, which is rare, was observed by Gautier. The tone of the voice may be weakened and become hoarse. According to Hall, the growth occurs in the pharynx in two forms—diffuse and circumscribed. In the diffuse variety, shiny, milk white patches form on the mucous membrane: in the circumscribed variety, white or yellowish gray, soft, sometimes horny, often pedunculated nodules or pointed excrescences make their appearances in the crypts of the tonsils. Dr. O'Chiari reports that in a very hard concretion from the tonsils, which he found, on chemical examinations, to consist of carbonates and silicates, he met with splendid specimens of leptothrix. The pillars of the fauces and the posterior wall of the pharynx, together with the lateral pharyngeal

walls, are sometimes covered with the parasites quite low down. Wright³³ reports a case where the greater part of the pharyngeal wall had upon it these waving cilia-like mycelial threads, reminding one of the downy hairs of an infant's skin. The epiglottis³⁴ is, in rare instances, studded with crater-like deposits of the fungi which occasionally migrate into the larynx.^{35 36} It is not necessary to speak at length regarding the diagnosis. Mycosis leptothricia is differentiated from diphtheria by the absence of local inflammatory appearances, the non-feverish condition of the patient, the discrete occurrence of the deposit, its hardness, and usually the simultaneous implication of the root of the tongue. It is generally easy to distinguish it from lacunar amygdalitis, because in that disease the points are soft and friable and half liquid, and not adherent. Lacunar cysts of the tonsils form flat and transparent plates, yellowish, isolated and habitually occupying the top of the tonsil. Calcareous concretions are larger and give out a stony sound under the probe. The caseous concretions of granular pharyngitis are softer and less adherent. The Brown-Kelly hyperkeratosis, in which we also note the presence of leptothrix, is different from the mycosis in the fact that the excrescences are rough, very adherent and of a characteristic form. Careful microscopical examination will establish a diagnosis in every instance. When thrush occurs in adults and old people it generally indicates a great want of vital power, and it is therefore of grave prognostic import. In the other form of mycosis the prognosis is favorable in spite of resistance to the treatment, which is to be active. In cases of thrush the important indication is the observance of the most scrupulous cleanliness in everything used, in children special attention being paid to the state of the bottle. Hall advises swabbing out the pharynx two or three times a day with a weak solution of carbolic acid, permanganate of potassium or sulphurous acid. In mycosis leptothricia hot gargles are indicated together with the extirpation of the growths with the forceps (Castex), or their destruction by galvanic or thermal cauterization. Tarplitz, Price-Brown³⁷ and others report cases successfully treated by the latter method. In obstinate cases Heryng extirpates the tonsils and then burns down any remaining nodules with the galvano-cautery. Chiari supplements the action of the galvano-cautery by painting the affected part with sublimate solution (1:1000); and by ordering the same solution (1:10000) for gargling. Wright³⁸ advises change of climate as really the most reliable plan of treatment. Heryng³⁹ reports a case in a physician who, after employing all the therapeutic measures recommended without result, was finally compelled to resort to

Folia nicotina (in the form of cigars, used frequently and "with delight"), and after two months he was perfectly cured.

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SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

Each meeting of an International Congress marks a new epoch in the history of the science which it represents, and the Sixth International Otological Congress, just completed in London, has been a decided and influential factor in awakening renewed interests in otology, in presenting possibilities for future advance and in forming pleasant and lasting friendships with representative otologists from every section.

The sessions of the Congress were well attended, and nearly every otological center in the world was represented. One of the difficulties in the way of an active participation by many enthusiastic members in the papers and discussions was due to the fact that many were not equal to the linguistic requirements of the occasion, as English, German, French and Italian were the official languages of the Congress, and several valuable papers were thus presented without receiving due attention.

Perhaps the most interesting and valuable feature of this Congress, however, was the Museum of Otology, arranged at the cost of much

labor and skill, well planned in every detail, the specimens presented in their most favorable aspects, and every facility afforded for inspection and examination of each individual specimen.

The gems of this complete museum were the celebrated Toynbee collection, the valuable preparations of Prof. Politzer of Vienna, and the interesting specimens on the comparative anatomy of the ear and nose of Prof. Stewart of the Royal College of Surgeons. The details of arrangement of this vast museum were in the hands of Mr. A. H. Cheatle, assisted by Dr. Jobson Horne. Much credit is due them for the success of this great exhibition. It was the consensus of opinion of members and delegates that this museum was the first feature of the Congress. Prof. Politzer, in moving a vote of thanks of the Congress to these gentlemen for their indefatigable labors in the interests of the museum, said: "I have attended every otological congress up to the present, and have also seen every important collection of this character in the world, and I do not hesitate to say that I have never before seen such a magnificent and well-organized museum, and I doubt if it will be possible to see such a one again."

A catalogue, fully descriptive of this collection, is now being published and will constitute a valuable reference volume.

Second to no other feature of the Congress were the many social entertainments tendered the visiting delegates, members and their ladies.

The pleasurable recollections of receptions and banquets, of dinners, general and special, of excursions to Windsor and Bray, of drives to Richmond and trips on the beautiful Thames,—these are graven in our memories as evidences of the hospitality and cordiality of our British hosts. We take this occasion to again express the sincere thanks and appreciation of the delegates from across the sea.

G.

We are pained to announce the sudden death, August 28, 1899, of our esteemed colleague, Dr. Max Thorner, of Cincinnati.

Dr. Thorner was forty years of age, a graduate of the University of Munich, recognized as a prominent and one of the ablest laryngologists in America, identified with every progressive movement in the interests of otology and laryngology, a fellow of the leading laryngological and otological societies, a contributor to several of our best journals and honored wherever he was known.

He was student, author, skillful surgeon and genial companion.

This irreparable loss will be deeply felt, not only in the field of laryngology and otology, but by the entire medical profession.

SOCIETY PROCEEDINGS.

SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

Convened in London, August 8-12, 1899.

President's Address—URBAN PRITCHARD (London).

It would be well to recall the story of the birth and growth of otological science. Although Toynbee was generally acknowledged to be the father of modern otology, for the date of its birth we must go back some 3,400 years to the then flourishing country of Egypt. Roosa, in his excellent treatise, referred to a certain ancient papyrus (called after its discoverer, the Papyrus Ebers) on which was written a monograph on "medicines for ears hard of hearing" and "for ears from which there is a putrid discharge." And here in the museum, might be seen a confirmation of the fact that ear troubles not only existed in those days, but that they could be cured; for we have the good fortune to possess a curious old Egyptian relic, consisting of a wooden tablet on which are portrayed, in bas-relief, two effigies of the sacred bull and two auricles; this was undoubtedly a votive offering to the god Hathor from some "grateful patient." In spite of its early birth, however, otology, except perhaps with regard to its anatomy and physiology, did not make itself of great importance until the second half of the present century. The Royal Ear Hospital, in Dean street, Soho, which was acknowledged to have been the first successful aural clinic in Europe—and I believe in the world—was established in 1816. But, speaking generally, we might safely assert that aural surgery continued to be more or less in the stage of infancy until between 1840 and 1860, when the study was vigorously taken up by Sir William Wilde and Toynbee, who thus gave a fresh impetus to the study of the pathology and treatment of diseases of the ear. Even then its importance was by no means generally recognized; indeed, only thirty years ago it was a general favorite saying of more than one celebrated surgeon that "ear diseases may be divided into two classes—those which can be cured by any general practitioner and those which, being incurable, may be relegated to the tender mercies of the ear specialist." In my student days I well remember the sarcastic manner of Professor Partridge when he said, "Ah, gentlemen, a little wax is a godsend to an aurist," meaning, of course, that its removal was an easy

method of earning a reputation. And, no doubt, there was a certain truth in those words, though not exactly in the sense implied by the good old professor; for who of us has not found that, by removing a plug of cerumen which had either not been diagnosed or which had resisted all the efforts of the general practitioner to dislodge it, had gained *kudos* and an appreciation which many of his more delicate operations had failed to secure? Things have indeed changed since then, for, instead of a few aural surgeons scattered here and there in Great Britain, we have now at least a couple of hundred, while the number of clinics in London alone had been increased from two or three to near upon twenty. And in many other countries this branch of medical science was even more strongly represented. As a natural result of the increased interest in the work, I would call attention to the unique museum connected with this congress, wherein is to be found the largest and most valuable collection of otological specimens, a collection which could only have been brought together by the union of international forces. The museum is so complete that if you had come to visit it alone your trouble would have been repaid. But in one respect there is still room for improvement. I refer to the need for the better recognition of otology by our universities and colleges. One step had lately been made in this direction, for the University of Edinburgh had now made it one of the qualifying subjects for her medical degrees. So far as the anatomy and physiology of the auditory apparatus are concerned comparatively little has been added in the last thirty years to the store of knowledge already gained, although a more intimate study of its parts has made that knowledge more complete and precise. In pathology there has been considerable advance. In disease of the meatus, although aspergillus was discovered before this period by Meyer, Schwartze and Wreden, yet it was not elaborated with any fullness until later. Also, the nature and classification of exostoses has been worked out within this period. Our knowledge of the changes in chronic middle-ear catarrh, and in sclerosis, has considerably advanced, although much here yet remains to be done. The effect of pathological conditions of the nose and naso-pharynx upon the auditory apparatus, adenoid vegetations more especially, has practically been discovered. In chronic suppurative catarrh, disease of the ossicles, the implication of the attic, the antrum, and the mastoid cells has been worked out; also the intracranial complications which sometimes followed. The nature of the granulations and polypi were now better understood, and, although Toynbee had already called attention to cholesteatoma, its pathological importance in con-

nection with mastoid disease was not fully realized until quite lately. In the pathology of labyrinthine disease there has not, perhaps, been so much advance: but Ménière's disease was now better understood, and Politzer has made known a disease of the bony capsule. Finally, the pathology of congenital syphilis affecting the internal ear has been partially worked out. The means of diagnosis has been considerably improved, while in treatment there have been immense strides, due to the adoption of antiseptic surgery. The nineteenth century, which has brought to the world so many wonderful blessings in other directions, has not been unmindful of our branch of medical science. For, whereas at its commencement the ear was regarded almost as a *terra incognita*, scarcely worth consideration except as the seat of one affection only—that which was generally known as “a deafness”—now, at its close, this organ was fully-explored ground, and had been proved well worth the exploration. Otology had been raised from the rank of pseudo-quackery to an honorable position in scientific surgery, and its importance and bearing upon the body as a whole was now fully recognized.

On a New Method of Measuring the Quantitative Hearing Power by Means of Tuning Forks—E. SCHMIEGELOW (Copenhagen).

Many experiments have been made in later years to find a reliable method for these measurements. There are the methods of Hartmann, Gradenigo and Lovardemaker, which, however, cannot be called satisfactory as they do not give exact results. In order to use the time and vibration of certain tuning forks in measuring the hearing power it is necessary to know the vibration curve. If it were possible to measure the amplitude of each tuning fork from the moment it was set in vibration to the moment when the tone died away the difficulty in using forks as reliable tests of quantitative hearing would be solved. In the light of their present knowledge the amplitudes of the deeper forks only are measurable. Bezold and Edelmann had by means of a very cleverly invented instrument constructed vibration curves of the deeper forks (from D¹ to F) and from these they constructed a standard curve. They, furthermore, presumed that this curve, being almost the same in all the deeper forks, must be the same for every fork, even the highest ones. It seems, however, that Bezold and Edelmann have started from wrong conclusions and that the result of their experiments do not agree with the theory. According to the theory, the amplitudes decreased at an approximately geometrical progression: that was to say, that the logarithms of the amplitudes diminished

directly with the time. This theory was no doubt correct, but only as far as the small amplitudes were concerned (Jacobson), or in other words, the logarithmical decrement was greater and irregular at the beginning, but toward the end it became nearly constant. By a very carefully prepared mathematical diagram it may be shown that in an examination of the curve found by Bezold and Edelmann that the differences between the logarithmics of the amplitudes corresponding to the time of 0 — 10 — 20, etc. — 100 seconds to begin with, decreased as they ought to do, but afterward increased, which they ought not to do. According to theory they should expect that the difference after decreasing as it did to 0.151 ought to remain pretty nearly constant. The difference, however, increased again, which meant that for some reason or other the vibrations were impeded at an increasing rate and the curve therefore not correct. Everything tended to prove that the curve of the higher fork was different from that of the deeper ones and that such fork had its own special curve. In order to find the curve of vibration for each tuning fork G. Forchhammer and I proposed the following method: A tuning fork is struck and the time in which it is heard at different distances from the ear is determined. The abscisses of the curve represent the distances, the ordinates the time of perception. The correctness of this method is founded on the fact that the amplitude is proportional to the distance at which the tone disappears, the intensity of the tone being constant when the "Hörschwelle" is reached, which is the moment when the tone can no longer be heard. The method is also practicable in so far that instead of the microscopic amplitudes the microscopic distances were measured, an advantage which is all the greater because the amplitude of the higher tuning forks could not be measured microscopically. The forks examined were made by Edelmann in Munich and were C, G, C¹ G¹, C² G², C³ G³, all of them unloaded.

The experiments were made under as good conditions as could possibly be procured in the open air at some distance from town. If, for instance, the curve of the C¹ fork (261 vibrations) was to be determined, we would proceed in the following way: By six series of experiments it was found that C¹ properly struck would be normally heard for 7 seconds at a distance of 100 centms. from the ear, 14 seconds at a distance of 80 centms., 23 seconds at 40 centms., 37 seconds at 20 centms., 62 seconds at 10 centms., 88 seconds at 5 centms. and 117 seconds when held as close to the ear as possible without touching it. According to the theory the differences between the time at a distance 5 — 10 centms. and the distances 10 — 20 centms. should be the

same because close to the ear where they had to do with small amplitudes the time increased at an arithmetical ratio (with constant differences) if the distance diminishes at a geometrical ratio. This theory was actually proved by the experiments. At the beginning of the curve (from 160 — 20 cntms. distance) it was found that the differences in time were smaller at the greater distances from the ear, that they increased up to about 20 cntms. distance and then became constant as far as the final part of the curve was concerned. The fact was that a tuning fork did not emit the tone, from the external surface of the prongs, but the vibrations were presumed to spread out from two points which were situated between the external surfaces of the prongs. By a series of experiments it was found that the distance between the tone center and external surface of the tuning fork was about 1 cntm. in the forks C, G, C¹, G¹ and of C², whilst the distance was about 1.5 cntm. in the forks G², C³, G³, C⁴, G⁴, C⁵. As the distances were reckoned from that surface of the prong which faced the ear they must therefore add to the distances 5 — 10 and 20 cntms. the distance of the tone center from the external surface of the tuning fork. With regard to the fork C¹ the addition would be 1 cntm. They were now able by means of calculated value of x and other experimentally-found data to construct the curve for C¹. If a patient heard the fork C¹ for instance seven seconds, the fork being struck powerfully and held close to the ear, it meant that the patient's minimum hearing amplitude or his Hörschwelle was $\frac{160}{1.3} = 123$ times his hearing distance. His hearing power $\frac{1}{(123)^2} = \frac{1}{15129}$ of $\frac{1}{123}$ times. If the normal hearing power is equal to 1 the reduced hearing power would be equal to 0.00007. Supposing, on the contrary, the patient heard the fork 62 seconds, his minimum hearing amplitude would be $\frac{11}{1.3} = 8.5$ times the normal hearing distance. His hearing power $\frac{1}{(8.5)^2} = \frac{1}{72.25}$ or 0.0138 if the normal hearing power was equal to 1. In this way we are able to construct the curve of every tuning fork and thereby to find how much the hearing power is diminished if the time in which the fork is heard at a certain distance from the ear, is known.

By comparing the curves of the various forks a great difference can be seen. The curves of some of them—the deeper forks—are steep and short, others—the higher forks—flattened and long. In other words, the assumption of Bezold and Edelmann that the curves are always the same is not correct and one employing their method could not get at reliable results. This could easily be illustrated by examples. For instance, the forks C — G¹ — C² — G³ — C⁴. These are, according to my experiments, normally heard close to the ear

during respectively 328, 202, 162, 55 and 43 seconds. Suppose we had a patient who heard these forks only for half the time, the normal hearing power would, according to Bezold and Edelmann, for all hearing forks, be equal to $0.049 = \frac{1}{20}$. If, on the contrary, they used the special curve of each fork the result would be quite different because it would be found that the decrease of the hearing power for C would be equal to $0.026 = \frac{1}{39}$ of the normal hearing, $G^1, 0.0012 = \frac{1}{144}$ of the normal hearing, $G^3, 0.00006 = \frac{1}{17384}$ of the normal hearing, and $C^4, 0.000025 = \frac{1}{40000}$ of the normal hearing.

The enormous difference between the results given by this and by Bezold-Edelmann's method is obvious. I therefore believe that if one wished to use the time in which a fork is heard to measure the quantitative hearing power, it would first of all be necessary to know the curve of the forks employed. In order to find these curves I hope the method here described may be useful.

Dr. Schmiegelow, replying to questions by Professor Politzer and Dr. Dundas Grant, said the experiments he had carried out were in connection with the mathematical aspect of the hearing power. In the clinical world Hartmann's methods were very good and practical, but he thought they were far from reliable. If they wanted to compare the result of the hearing power by the different tuning forks and to know the influence on the voice they could not get any certain basis to work upon. He was only as yet on the fringe of the question.

Functional Examination of the Ear, Advocating a Uniform System of Recording Results—G. GRADENIGO (Turin).

The question of measuring the amount of hearing is an extremely difficult one, so much so that every author has his own system. The consequence is that there is a great loss of time in studying any text book or paper, and it takes a long time to unravel the method the author has adopted. It is of the greatest importance that at an International Congress like the present one a uniform system of measuring the hearing power should be adopted. In any system there are two things that should be remembered. First it should be a practical, not a complicated system; second, it should be easily inscribed in text books and ought not to take up so much space. This method embraced these two points. The hearing distance is noted on two lines—the upper line for the right and the lower one for the left, and Latin terms are used so that they can be comprehended by all nations instead of each nation using its own language. For the Schwabach experiment, in which the vibrations

were normally higher, I suggest the using of the letter S, followed by plus or minus as the case might be. With regard to Weber's system I use the letter W, and for the right and left ear indicate an arrow going upwards or downwards. For the Rinne experiment the letter R should be used with the plus and minus. The next is the experiment of the watch, and that should be indicated by the letter H (Horologium). The experiment of Politzer may be indicated by the letter P; for a whisper the small v should be used and for the conversational voice a large V. Finally there is the Hartmann experiment, to be indicated in a similar way—by Latin nomenclature. This system is simple, quick and easily carried out and I suggest its universal adoption.

Experiment Concerning Acoustic Phenomena in Fluid Mediums (with Demonstration)—R. KAYSER (Breslau).

The author dealt with the results of telephones one end of which was submerged in water. There was a membrane, a second strata of water, a second membrane containing two openings, one connected with an outer tube and the other with the diaphragm. Of a vibrating tuning fork only the middle tones were heard, the lower and higher being lost.

Tuberculosis of the Middle Ear—O. BRIEGER (Breslau).

Some Observations upon the Diagnosis and Treatment of Tuberculous Disease of the Middle Ear and Adjoining Mastoid Cells—W. MILLIGAN (Manchester).

The widespread interest which has of late been manifested in this and other countries in the endeavor to check the ravages of tubercular disease in its numerous forms has an interest to the otologist, not only on account of the general merits of the case, but more especially on account of the frequency with which tubercular lesions are met with in and around the middle ear. The factors which come into play in producing tubercular lesions of the middle ear and its adnexa are but imperfectly understood, and their investigation opens up a wide field for research and experiment. Does the bacillus gain entrance to the middle ear by way of the Eustachian tube or is it conveyed along vascular or lymphatic channels? What also is the relation between the tubercular naso-pharyngeal adenoid vegetations and tubercular middle ear disease? Questions such as these are not easily answered, and yet their solution must appeal to all as being of much importance. That a large proportion of the

cases of suppurative middle ear disease with accompanying bone lesions met with in practice are of a tubercular nature will be admitted by all, and that the prognosis in such cases is not very favorable will be conceded by those who had had large clinical experience.

The characteristic features of tubercular middle ear disease might be somewhat masked on account of an accompanying pathogenic infection, and an accurate diagnosis might be impossible if one relied upon finding the bacillus of tubercle in the secretion from the middle ear. Amongst causes which might be considered predisposing are the following: (1) Hereditary tendency. (2) unhealthy environment. (3) unsuitable feeding. (4) exposure to infection from tuberculous relatives. (5) the presence of naso-pharyngeal adenoids. The relation of nasal obstruction to tubercular middle ear disease deserves special consideration. In many cases post-nasal adenoids were present and in a small proportion had themselves been tuberculous. The almost constant degree of Eustachian catarrh which their presence implies produces a soil which is favorable to the growth of the tubercle bacillus, and once it finds a footing in the middle ear the conditions favorable to its development are present, namely a suitable soil, a more or less uniform temperature, etc. In the early stages these tubercular foci appear as slightly elevated, yellowish points in the mucosa, after a time coalescing and breaking down to form superficial tubercular ulcers. Should the deposit occur on the inner aspect of the membrane, perforation ensues. Such perforations might be multiple, and the destruction of tissue is usually quite painless. The edges have a pale, indolent-looking appearance, and the accompanying discharge from the middle ear is usually thin, ichorous and frequently fetid. Within mastoid cells such deposits are also frequent, and in some cases it may be determined that the disease begins first of all within the mastoid and subsequently spreads to the middle ear. At a very early stage the bone becomes affected and undergoes an amount of destruction almost inconceivable considering the comparatively slight external indications present. In some cases practically the entire cancellous tissue or mastoid—occasionally of both mastoids—had been eaten away, leaving merely a bony shell upon which the middle fossa was poised. Owing to this early and extensive destruction of bone the facial nerve in part of its course was exposed with resulting facial paralysis. In fact, early facial paralysis in a case in which sthenic symptoms were absent should be looked upon with suspicion and as an even probable manifestation of an underlying tubercular lesion. Early

implication and enlargement of the glandular structures around the ear is also a most important symptom and when masses of enlarged glands occurred around the ear any discharge from the tympanic cavity should be microscopically examined for bacilli. To definitely establish the fact that the aural lesion is of a tubercular nature the characteristic bacillus must be found. The method which gives the most reliable results is the inoculation of guinea-pigs with small fragments of tissue removed from the middle ear or adjoining mastoid cells and it is advisable to inoculate with fragments of bone and mucous membrane from an area where the disease was seen to be advancing. In a few weeks' time, should the tissue inoculated be tuberculous the lymphatic glands will be found enlarged and as time goes on the tubercular virus will be found to have spread over the animal's body, and glands and viscera being attacked in the following order according to the results obtained by Prof. Delepine. During the second week after inoculation the lymphatic glands upon the same side of the body below the diaphragm and the spleen will be found enlarged. During the third week, the liver, the mediastinal and the bronchial glands. During the fourth week the lungs, the cervical and axillary glands. After fourth week some of the lymphatic glands of the opposite side of the body below the diaphragm became affected, but this takes place extremely slowly and the sublumbar and popliteal glands escape for a considerable time. Microscopic sections made from these glands and stained for bacilli frequently reveal their presence.

The practical difficulties encountered in removing tubercular deposits within bone are immense and in no region of the body are those difficulties greater than when tuberculosis attack the temporal bone. The complications to be feared are: (1) Meningitis. (2) tubercular enteritis. (3) general marasmus. The treatment of such cases must be considered from two points of view, according as it is non-operative or operative.

The first and main essential is to provide free drainage. This implies opening and cleansing the mastoid cells, and it is a remarkable fact how often in such cases without any external and objective sign or indication the mastoid cortex will be found extensively perforated and a pulctaceous mass immediately exposed to view. All softened and carious bone must be scraped away and as smooth a cavity left as possible, even if this necessitates laying bare the dura and walls of the lateral sinus. The cavity should be allowed to granulate from the bottom and care must be taken to stimulate any sluggish area by application of chloride of zinc, nitrate of silver, etc. Frequently more than one scraping is necessary.

An important point arises in connection with the treatment of the accompanying enlarged glands. Some of the glands might be enlarged purely as the result of septic absorption, and if the morbid cause be removed this enlargement would subside, especially if aided by suitable treatment. But many of the glands are of a tubercular nature and are prone to undergo caseous degeneration while at the same time they are a source of possible systematic infection. Hence after the mastoid area and cavity of the middle ear has been attended to and as soon as condition of the patient permitted, another operation should be undertaken with the object of removing the enlarged and tuberculous structures. General treatment such as the administration of cod liver oil, iodide of iron, syrup of iodine, etc., is useful, as is also change of air and liberal diet.

Professor Politzer observed that operation often accelerated death.

Dr. McBride said he should like to know what method Dr. Brieger used in diagnosing. In Britain they were not allowed to make the inoculation experiment.

Dr. Brieger made the diagnosis by examining the granulations.

Congenital and Acquired Anomalies and Absence of the External Auditory Canal—A. HARTMANN (Berlin).

Two cases were described. One was that of a newborn child and the other was an adult. The specimens, together with models of the external ear, were exhibited, and are to be seen in the museum of the Congress. The author also related the case of a patient with acquired occlusion of both external meatuses resulting from scarlet fever. On one side was performed the radical operation with a considerable improvement of the hearing.

Holinger (Chicago): This report is very interesting because we must face the question whether to operate in such a case. In examining 510 children of the institute for the education of deaf and dumb in Jacksonville, Ill., I found a girl of fifteen with absence of both auditory canals. The girl was growing more and more deaf on account of constantly recurring attacks of otitis media. The first attack came on after scarlet fever and the pus broke through the mastoid. The question of operation answered itself. I should operate in the following way: Chisel behind the auricle down to the middle ear and remove the malleus and incus; allow the wound to granulate and then cover according to Siebermann with Thierch's grafts. Thus a canal is created behind the ear. The operation would be to improve hearing mainly and to stop the recurrence of the suppuration.

On Blue Ear Drums — “Tympanum Ceruleum” — F. ROHRER (Zurich).

The author reported a case of this unusual affection, and discussed the pathology and etiology.

The Appearance of Varices on the Ear Drums — ROHRER (Zurich).

This paper was submitted in conjunction with the preceding one by the author. The special features of both papers were demonstrated by well-prepared charts.

Unusual Complications of Adenoids on the Riviera — T. BOBONE (San Remo).

Naso-Pharyngeal Adenoids as a Causative Factor in Ear Diseases — A. T. HAIGHT (Chicago).

Among the most interesting cases, the author said, that came before the otologist were those pertaining to post-nasal vegetation affecting the hearing, and there were few patients to whom more satisfaction could be rendered than to those so affected. Adenoid vegetation seemed not to be restricted to countries, to climates, to sex, to color, or race of man. Adenoid vegetation might produce inflammation of the middle ear (1) by constant irritation on account of the obstruction to the circulation of the blood by pressure, (2) by blocking the orifice of the Eustachian tube partially or completely, (3) by their injurious effect upon the general economy of the child and particularly upon the nerves of special sense, (4) by leaving as a sequela a post-nasal catarrh which sooner or later establishes some form of middle ear disease. In children who have suffered from adenoid vegetation the hearing is generally very sensibly impaired. In many cases the Eustachian tube is completely blocked by dry secretions of the post-nares. Diminution of power of hearing on the side where the adenoid existed is frequently observed. On the opposite side where the post-nasal space is clear the hearing is normal. He had seen cases where the hearing was seriously impaired and the drum membranes normal in appearance and yet with safety he assumed the faulty hearing to be dependent upon the growths in the naso-pharynx. Mouth-breathing had an important otological bearing on the subject. The mouth-breathing child was usually found shallow through the upper part of the chest and with very small lung capacity. We frequently meet with children affected with adenoids who were not mouth-breathers, and these children were plump, well developed and of healthy appearance, although they

usually had some ear complication. Examination of twenty-six children for deaf-mutism revealed only four free from post-nasal adenoids; sixteen of those examined showed marked facial deformity from mouth-breathing. He coincided with Harrison Allen and Sisson who had the opinion that there were many children in homes for feeble-minded and idiots all over the world who were affected with this disease, and who by a comparatively trifling operation could possibly be restored to usefulness and their families. It would be obvious to mention every analogous case reported of deaf mutes who after the removal of adenoid vegetations gave evidence of hearing and began to speak some words. The general belief that adenoid vegetations were never present after the thirtieth year was contradicted by Conetoux, of Nates, who operated upon a man of sixty-five to cure a marked unilateral deafness. I have found vegetations in ages above sixty and frequently between thirty and forty. They did not differ histologically from adenoids in children. It was not uncommon to observe these formations in the aged who were hard of hearing. Notwithstanding all the writings of the past ten years I do not think that the pathological enlargement of the lymphoid tissue of the naso-pharynx has received sufficient attention in the world's textbooks. If the symptoms of these growths were more generally recognized by the family physician and their removal accomplished they would not find so many chronic suppurative and non-suppurative inflammations of the middle ear with the history dating back to an attack of diphtheria, scarlet fever, measles or other fevers. As to treatment I should say it was never too early nor was it ever too late. At the first recognition of existing growths the operation should be performed at once. Curetting is the only true basis of treatment. I am not a believer in general anesthetics in children over the age of twelve, as local anesthesia after twelve made such an operation absolutely free from danger; but there were some cases where a general anesthetic must be administered especially in refractory children and nervous adults. In children it was advisable to anesthetize in a sitting posture and he preferred bromide of ethyl to any other of the numerous anesthetics.

Knapp (New York) also advocated the use of ethyl. There was absolutely no danger.

Eeman (Ghent), Grazzi and Gradenigo also said a few words generally, supporting the opinions of the essayist.

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(To be continued in October issue).

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

I. NOSE.

The Significance of Nosebleed as an Early Symptom of Softening of the Brain and the Relation of both Diseases to Arteriosclerosis—KARL KOMPE—*Archiv fuer Laryngologie*, Band ix, Heft 2, 1899.

After a history of five cases, the author gives his reasons for thinking that nosebleed may be a symptom of the earlier stages of arteriosclerosis, and hence a forerunner of cerebral softening (Encephalomalacia). It is established that sclerotic changes are very apt to be set up in the carotids, especially the internal, as early as anywhere in the arterial system. These changes most readily pass along into the ramifications of the carotids. The ethmoidal artery, a branch of the ophthalmic, being thus derived from the internal carotid, supplies the upper and anterior nasal structures; while the sphenopalatine, a branch of the internal maxillary, and therefore a derivative of the external carotid, supplies the posterior portion. These vessels being among the first to become weakened may easily give rise to severe and frequent epistaxis. The intima becoming first affected, the blood seems to lose its coagulability, and in addition to this the elasticity and retractile power of the arterial coats being lost, there is no good reason why a hemorrhage should not continue almost to exhaustion. As a matter of fact plugging the nares is often necessary. All practitioners, and especially laryngologists and rhinologists, who are most frequently called to these cases, are urged to make a careful examination of the arterial system. This is of especial importance as treatment in the early stages does seem to accomplish some good, while later on it is of no avail.

VITTUM.

Acute Rhinitis, Causing General Infection—Report of Liverpool Medical Institution, *British Medical Journal*, May 13, 1899.

Dr. Pemerson related a case which had caused general infection of the system, and in which treatment of the nasal condition caused rapid subsidence of the fever.

FOX-CROFT.

Some Causes that Contribute to Failure in the Treatment of Nasal Catarrh—JNO. A. HALE—*Med. Herald*, Vol. xviii, No. 4, 1899.

Directs attention to the frequent failure of the practitioner to cure, or even permanently relieve nasal catarrh. Out of these failures develops the quack. The patient experiencing no benefit from the regular physician, falls a victim to the flaming advertisements hoping to prevent his disease from "running into consumption." The quack is shrewd enough to afford relief, and the physician is discounted. This success is not due to any special knowledge possessed by them, and to forestal them we have only to determine the pathologic conditions present, and base thereon a more rational therapy. Patience is a desideratum much needed. Uncertainty of conditions has led many to empiric remedies.

There are only two local indications to be met. First, a cleansing of the mucous membrane; secondly, keep it so. Note the condition of the stomach, keep up nutrition and improve the general health. A weak solution of permanganate of potassium was once the favorite remedy to fulfill the local indications, but this has given away to glyco-thymoline, which is lauded for its specificity.
EWING.

Rhinoplasty—KUEMMEL—*Deutsche Med. Wochenschr.*, May 11, 1899.

At a meeting of the Medical Society of Hamburg, held December 13th, the author advocated a return to the old method of Tagliacorza. This operation, where the flap for the artificial nose is taken from the arm, avoids the increased disfiguration which occurs where the flaps are taken from the cheeks and forehead. Inasmuch as the skin from the arm shrinks very much more than that taken from the face, the author advises that a flap be taken which is twice as large as the region to be covered. The principal objection to this method is the painful position of the arm. Patients will, however, readily submit to it, when it is explained to them that it is for the purpose of avoiding any further disfiguration of the face. The edges of the nasal defect are freshened, the arm is then fastened to the head by a plaster bandage, the flap loosened from the arm and its free edges sewed into the freshened nasal surfaces. Between the sixth and tenth day the pedicle attaching the flap to the arm is gradually cut through. The material for the artificial nose has now been obtained, and the surgeon may adopt measures suitable to the individual case.
VITTUM.

Mouth-Breathing—JAMES M. CRAWFORD, Atlanta, Ga.—*Journal Am. Med. Assoc.*, May 27, 1899.

The author recites the various causes of mouth-breathing. In operating for adenoids, he prefers the finger where the tissue is soft, and the Gleitsmann forceps where fibrous. No anæsthetics are used.
STEIN.

Severe and Threatening Collapse After an Operation for Nasal Polyps—MAX BREITUNG—*Wiener Klin. Wochenschr.*, June 1, 1899.

The patient, a man well up in the fifties, was the subject of a moderate degree of arteriosclerosis. Heart action not quite regular. Operation without cocaine. During half an hour fifteen polyps were removed. No bad symptoms whatever during the operation, but at its close the patient suddenly exclaimed: "I feel bad;" the eyes became fixed, the lower jaw fell and insensibility supervened. The pulse disappeared and respiration was scarcely perceptible. The author at once commenced artificial respiration and at the end of fifteen minutes was rewarded by seeing slight irregular respiratory movements, while at the same time the pulse became perceptible. Gradually the normal condition was restored. The author is inclined to attribute the accident largely to fear. This cause, together with a heart enfeebled by the disturbed nasal respiration, led to the sudden collapse. No cocaine was used, so that nothing can be attributed to the action of that drug.

The author is of the opinion that we ought always to be careful about operating on aged people, and particularly if arteriosclerosis is present.

VITUM.

Report of Two Cases of Large Vascular Tumors of the Nose and Pharynx—F. M. COOMES—*Louisville Med. Journ.*, March, 1899.

A report of two cases of large vascular tumors of the nose and pharynx. In view of the severe hemorrhage which developed while operating on the first tumor, the author believes it to be a fibro-angioma, but no histologic examination appears to have been made, and it does not seem to differ in the description from the fibromas in this region in general.

The second is a similar case. No reference is made to recurrence, which is characteristic in this form of tumor.

SCHIEPPEGRELL.

On the Close Relation between the Nasal and Cranial Cavities as a Cause of Brain Disease—WILLIAM C. KRAUSE, Buffalo, N. Y.—*The American Medical Quarterly*, June, 1899.

The author believes the cribriform plate of the ethmoid to be "the ventilator of the brain," and through them there is direct aeration of the brain. Nasal obstruction causes deficient brain and mental development.

Owing to this naso-cranial alliance, and the nose being such an exposed cavity and a favorable spot for the collection of micro-organisms, infection of the brain may take place this way. This may particularly be true in cerebro-meningitis, where the nasal secretions are found to contain the meningococcus intracellularis. Therefore the nasal secretions of meningitis should be considered infectious.

The moral of the article is in a plea for a more rigid hygiene of the nose.

STEIN.

Nasal Fractures—O. L. SMITH, Chicago—*The Clinique*, May, 1899.

The immediate replacement of the broken parts by manipulation from within and without, followed by a support of gauze packing, or a nasal splint, should be resorted to. STEIN.

Chronic Nasal Catarrh—P. I. LEONARD—*Med. Herald*, Vol. xviii, No. 6, June, 1899.

A general review of the present pathology and treatment of nasal catarrh. The author has found vibratory massage thoroughly carried out of great benefit in ozena. EATON.

II. MOUTH AND NASO-PHARYNX.

Chronic Pharyngitis—Report of the Royal Academy of Medicine in Ireland—*British Med. Journ.*, May 6, 1899.

Dr. Robert Woods read a paper on chronic pharyngitis and its relation to nasal obstruction, in which he expressed his belief that mouth breathing was the essential cause of chronic simple inflammations of the throat. He reviewed the chief functions of the nose and pointed out how in mouth breathers the disease of the special apparatus for modifying the air, by warming, moistening and filtering from dust must affect the throat injuriously, since the throat was compelled to take on the function of the nose. In support of this contention he quoted an observation he had repeatedly made that in these cases of chronic pharyngitis if the velum palati be lifted the pharynx wall under it will be found normal. In addition to the more familiar forms of nasal obstruction he drew attention to a common condition of the nose when the passage, though free enough in the day time, becomes stopped at night. This results, apparently, from the difference in level of the head between the upright and horizontal positions, there being less drainage and therefore greater tendency for the congested soft tissues to encroach on the air-space in the horizontal than in the upright. The paper concluded with a short account of the operative nasal treatment for the cure of the condition.

FOXCROFT.

Tonsillar Calculi—ROBT. H. STRONG—*British Medical Journal*—May 6, 1899.

A boy, aged 13, while sitting reading, spat up a concretion and a few minutes after spat out another smaller one. Examination showed a depression behind the left pillar of the fauces which had evidently been occupied by the calculi. There was slight hemorrhage but no tenderness. The points to be noted are: (1) The youth of the patient; (2) The absence of noticeable sore throat previous to the discharge of the calculi; (3) The sudden discharge of the concretion without discomfort. FOXCROFT.

Do the Tonsils Offer an Entrance to Tubercle Bacilli?—VON SCHREIBER—*Deutsche Med. Wochenschr.*, May 25, 1899.

A most careful and scientific search for tubercle bacilli in the tonsils: the object being to establish the frequency of primary tonsillar tuberculosis. The material obtained consisted of tonsils removed by operations from young persons whom a careful examination showed to be free from tuberculosis. Further, the tonsils from those who died of other diseases or by violence, and in whose case an autopsy showed no tubercular affection. Lastly, the tonsils of persons affected by tuberculosis of varying intensity. Altogether a very large number were subjected to most careful microscopical and bacteriological tests. Of the whole number only three were found where possibly a primary tonsillar tuberculosis was present: and even these cases were not beyond question.

The results seem to indicate that the tonsils are not very frequently the point through which tubercle bacilli gain entrance into the system.

VITUM.

Rheumatic Tonsillitis—BERTRAM ABRAHAMS—Report of Clinical Society of London in the *British Medical Journal*, February 4, 1899.

The paper was based mainly on cases observed by the author himself during three years. The bacteriology of many of the cases had also been studied with a view of obtaining some light on the etiology of the disease itself. Details were given of a number of cases illustrating (1) the occurrence of endocarditis after non-scarlatinal tonsillitis without the intervention of arthritis or chorea; (2) tonsillitis immediately followed by a first attack of chorea; (3) repeated attacks of chorea each preceded by tonsillitis; (4) the occurrence of sore throats at various points in the rheumatic series.

The following conclusions were put forward: 1. The more common varieties of rheumatic sore throat fall into two main categories, faucial erythema and tonsillitis proper. 2. Faucial erythema is most common in adults, rheumatic tonsillitis in children, in whom it usually assumes the follicular type, quinsy being more frequent in older subjects. 3. Faucial erythema is an initial manifestation of acute rheumatism, tonsillitis may be the actual primary lesion. 4. Many cases are now definitely on record in which endocarditis has followed a non-scarlatinal tonsillitis unaccompanied by joint pains. In numerous other instances the tonsillitis has immediately preceded an attack of arthritis or of chorea. 5. The presence of the same micro-organisms in the tonsils, joints, blood and urine is evidence in favor of the participation of pyogenic cocci in the etiology of rheumatism.

FOXCROFT.

Unusual Lodgement of a Fish Bone—R. MCKINNEY—*Memphis Med. Monthly*, March, 1899.

A case of a fish bone which was lodged in the tonsil. It was removed without difficulty.

SCHEPPEGRELL.

Two Cases of Congenital Fissure of the Uvula—A. DWORETZKY—*Zeitschrift fuer Prak. Aerzte*, April 15, 1899.

The author reports two cases. In one the division of the uvula was complete from base to apex. In the other the fissure extended $2\frac{1}{2}$ to 3 cm. upwards from the tip. No symptoms or inconvenience of any kind had been observed, and the malformations were only accidentally discovered. VITUM.

Complete Adhesion of the Epiglottis to the Base of the Tongue—RISCHAWY—*Wiener Klin. Wochenschr.*, June 1, 1899.

At a meeting of the Vienna Laryngological Society, held April 6th, the author reported a case of the above trouble which occurred as a result of cicatricial contraction after the healing of syphilitic ulcers. The entire epiglottis was firmly adherent to the tongue, and, in fact, formed a continuation of that organ.

The patient has no trouble in the way of food entering the larynx, although there seems to be a little difficulty in the act of swallowing. The finer sense of taste is somewhat dulled, but this may be attributed to the fact that a part of the gustatory area is covered in by the epiglottis. VITUM.

III. ACCESSORY SINUSES.

On Empyema of Sinus Frontalis—F. FEHLEISEN—*Pacific Record Med. and Surg.*, Vol. xiii, No. 11, June, 1899.

Up to the present time the author has operated upon thirty cases. His first cases were operated upon according to the older method of trephining the frontal sinus. The results have not been satisfactory, the wounds healing slowly or not at all. Hence of late years he has followed the advice of Nebinger and Kuhnt and removed the entire anterior wall of the sinus in every case, and in most of them the floor too. In this way the mucous membrane is completely exposed and taken away. The wound heals rapidly, often by first intention, with fair cosmetic effect. The author exhibited two cases.

[This paper was read at the annual meeting of the Western Section of American L., R. and Otol. Society. The two cases were shown. Cure was complete, but the consensus of opinion was that the cosmetic effect was not what the operator claimed, considerable deformity being present.—ED.] EATON.

Case of Double Empyema of the Frontal Sinus with one Infundibulum—W. R. H. STEWART—*Lancet*, December 10, 1898.

A patient, twenty-nine years of age, consulted the author two years ago for stuffiness of the left side of the nose, with a discharge of some duration, and occasional severe frontal headache. Examination showed polypi with an abundant milky-white discharge on the left side. The right side was apparently normal. There was

no bulging or disfigurement of the face. The radical operation was explained to the patient, who, however, would not have it done, preferring the milder mode of treatment. The polypi were therefore removed, together with the anterior ends of the middle turbinates. A free discharge remained, but all sense of stuffiness and headache disappeared. About eight months ago, however, she wished for the major operation, as the discharge continued so profuse. All the symptoms pointing to unilateral disease, the author operated through the brow incision with a small trephine. The bony septum between the sinuses was found to be situated well over to the left side, and was complete with the exception of a small hole posteriorly, through which pus was oozing. The septum was removed, but there was so much granulation tissue in the right sinus that the incision was continued down the ridge, across the top of the nasal bones (taking care to avoid the spot where the spectacle-frame might rest), and up the other ridge, and the flap was turned up. The bone was then chipped away with forceps until there was space enough to thoroughly clear out the right sinus. The reason why there was no discharge into the right side of the nose was then explained, for with the finest probe no sign of an infundibulum could be found on that side. The sinus discharged through the opening at the back of the septum into the left infundibulum. The usual funnel-shaped india-rubber tube was passed through this into the nose, and the wound was closed. The patient did very well.

The points to be noticed in this case are: (1) The absence of the infundibulum on the right side, which led to the belief that the right sinus was healthy and did not need interference, there being sufficient disease on the left side to cause all symptoms; and (2) the amount of room gained, and the very small apparent scar left by the incision, which the author has since employed with success in more than one case of double empyema.

STCLAIR THOMSON.

Orbital Phlegmon Following an Acute Empyema of the Frontal and Ethmoid Sinuses—ERSTEIN—*Wiener Klin. Wochenschr.*, No. 28, 1899.

At a meeting of the Vienna Laryngological Society, the author demonstrated a case of the above trouble.

After an attack of measles there occurred severe pain in the right supra-orbital region. After a two days' fever, pronounced swelling of the right eyelid supervened. The tissues were tense, shining and red, and this condition extended to the inner angle. The eyelid could not be raised. Marked protrusion of the globe was present and intense conjunctival and ciliary injection.

A rhinoscopic examination demonstrated an empyema of the frontal sinus, which was at once irrigated, after removal of the anterior end of the middle turbinal. Great relief followed, but it became evident that the anterior ethmoid cells were also involved. These were opened and the cavities cleared of a large quantity of pus. A marked improvement followed this procedure, and during the next twenty-four hours the vision was restored from one-tenth to normal.

VITTUM.

Acute Inflammation of the Antrum of Highmore—FOUCHER—*L'Union Méd. du Canada*, March, 1899.

Even in cases where the sinusitis is due to dental caries it is not always necessary to perforate the alveolar process, and some of the cases reported by the author were cured without resorting to this measure. Acute inflammation of the maxillary sinus usually recovers promptly without the intervention of surgical measures, and patients should be spared the annoyance of a perforation of this cavity.

In view of the fact that the author has found a dozen cases of acute inflammation of the maxillary sinus in his private practice in the course of two years, he believes that the assertion of Stirling is true, that this affection is much more frequent than is usually supposed.

SCHEPPEGRELL.

A Contribution to the Study of Antral Disease—J. DENNIS ARN-

OLD—*Pacific Record Med. and Surg.*, Vol. xiii, No. 11, June, 1899.

The author's paper deserves serious attention. He points out that the relations between the accessory sinuses and the contiguous organs and structures are not well known, though the intimate relation and connection between the frontal sinus and the maxillary antrum was described twenty years ago by Zuckerkandl. He refers to three cases published by Dr. Brophy, of Chicago, of co-existing empyema of these cavities, in which there was discovered intimate communication between them. This led him to examine eighty-four skulls, and he was surprised to find that in thirty-seven of them the frontal sinus opened directly through the infundibulum into the antrum of Highmore.

"It must be borne in mind that the infundibulum, which embraces the opening of the frontal sinus into the nose, is in nearly fifty per cent of all cases a grooved canal with a curvature in the direction of the normal opening of the antrum, and so enclosed by the projecting walls of the middle turbinated bone that it drains directly into the antrum of Highmore. With such relations existing between the two cavities, it becomes very evident that all measures adopted for the treatment of maxillary disease must be nugatory if there exists an implication of the frontal sinus, the morbid secretions of which are constantly draining into the antrum."

The author describes an interesting case of his own, showing connection between disease of the lachrymal sac and antrum empyema. The patient, a woman fifty-seven years of age, was treated by a dentist for left-sided antral disease. A free opening was drilled into the antrum, some diseased bone and polypoid granulations removed with the curette, a gold tube fitted, and irrigation of the cavity with antiseptic and astringent washes instituted. While all pain, swelling and acute symptoms were immediately abolished, a faithful adherence to this treatment for nearly eight months

failed to cure the purulent catarrh of the cavity. Noticing that there was inflammation of the patient's left eye, and that there was an old standing affection of the tear duct, the dentist referred her to the author, who found the sac much relaxed and the lower part of the duct somewhat contracted, but without much trouble passed a Bowman No. 1. But on examining the nose with the probe in situ he was surprised to find it projecting into the latter through the middle meatus and lying upon the superior surface of the inferior turbinated bone. The possible connection between the purulent catarrh of the lachrymal duct and the antrum became apparent. On injecting through the duct a weak solution of permanganate of potash, fully one-third of the fluid promptly entered the antrum and flowed through the tube into the patient's mouth. The cure of the dacryocystitis, which was accomplished after five weeks of treatment, was promptly followed by a cure of the affection of the antrum.

EATON.

IV. LARYNX AND TRACHEA.

A Case of Epithelioma of the Larynx—J. E. BOYLAN, Cincinnati—*Cincinnati Lancet-Clinic*, May 20, 1899.

The interesting features of the case are the early involvement of the lymphatics, almost total absence of pain, absence of ulceration. The only symptoms complained of were dyspnoea and violent coughing on any effort to swallow. The patient was fed *per rectum*. The discussion brought out the advantages of feeding through a catheter passed through the nose into the œsophagus. A gastrotomy is often necessary and advisable.

STEIN.

Contribution to the Technique of Extirpation of the Larynx—

DR. OSKAR FÖDERL—*Archiv fuer Klin. Chirurgie*, Band lviii, Heft 4, 1899.

Inasmuch as the condition of the patient after extirpation of the larynx is often a deplorable one, the author has been searching for a method which would leave the laryngeal region in a condition more nearly approaching the normal than is usually done. He reports a case and gives cuts of the laryngoscopic picture after the operation. The principal feature of his method consists in strongly drawing up the lower end of the trachea, after the resection, and uniting it to the remnants of laryngeal structure above, using the hyoid bone as an anchorage. This is also done in case every vestige of the larynx is removed.

In the case reported, total extirpation of the larynx was necessary. After some trouble with granulations about the artificial rima glottidis and with stitch abscesses, the final outcome was good. The patient was able to speak without an artificial larynx, and that, too, in a voice which could be heard at a distance of several paces. F. is of the opinion that much better results could be obtained in cases where the epiglottis and the arytenoid folds could be retained. Frequent operations on the cadaver serve to confirm this opinion.

VITTUM.

Vocal Resonance—E. M. MAGRUDER—*Virginia Med. Semi-Monthly*,
March 10, 1899.

A clear and concise statement of the various forms of vocal resonance in health and disease, with reference to their value in physical diagnosis.

SCHEPPEGRELL.

Intubation in Chronic Laryngeal Stenosis—A. CAHN—*Deutsche Med. Wochenschr.*, May 11, 1899.

At a meeting of the Medical Society of Lower Alsace, held at Strassburg, February 4th, the author stated that in stenoses of nervous origin, particularly bilateral posticus paralysis, tracheotomy is preferable to intubation, for the reason that the trouble is incurable. Among tumors, the benign forms seldom require the adoption of special measures for relief of the stenosis, because an operation for the removal of the tumor usually gives complete relief. In the case of continually recurring papillomata, tracheotomy is preferable to intubation because these tumors only disappear when the larynx has had a complete rest from its functions. In malignant tumors tracheotomy is always preferable.

In tuberculous processes the author endeavors to avoid intubation because he fears that gangrenous processes may be set up in the larynx by the pressure of the tube. Besides, it is very difficult for the patient to bring up the rather abundant secretions through the tube. It is in the syphilitic scleroses that the tube finds its greatest field of usefulness. During the process of healing it is of very great importance to have some firm body within the larynx to prevent the formation of extreme stenosis by scar tissue.

VITTUM.

Bilateral Paralysis of the Laryngeal Abductors successfully treated by the Removal of the Isthmus of a Bronchocele—
SAMUEL LODGE, JR.—*Lancet*, February 4, 1899.

The patient was a schoolboy, aged fourteen, with a seven years' history of difficulty of breathing. He was found to have double abductor paralysis, which by exclusion was referred to enlargement of the thyroid gland. Iodide of potassium and thyroid extract were both given without affecting the size of the goitre. The isthmus of the thyroid gland was therefore removed. There was no immediate improvement, and even six months afterwards the boy was reported to be in the same condition. Shortly afterwards, however, it was noticed that the stridor during sleep had ceased. The boy was then able to run as well as his schoolmates, and ten months after the operation the larynx was found to be quite normal; the goitre had disappeared, and, in spite of his being a year older, the patient's neck only measured 13 inches, instead of the 14 inches it measured before the operation.

The only case recorded in British medical literature which the author has been able to discover almost corresponding to this one is related shortly in the late Sir Morell Mackenzie's classical work.*

* "Diseases of the Throat and Nose," Vol. i, 1880, p. 444.

The patient, aged fifteen years—a tall lad—when perfectly quiet could breathe fairly well, but on the slightest exertion he experienced great dyspnea, and during sleep made a loud noise in his breathing. On examining the neck, a moderate-sized but very hard bilateral goitre was perceived, and on using the laryngoscope, the abductors of the vocal cords were found to be paralyzed on both sides. The abductors did not seem to be at all affected, and the voice was perfectly normal. By varied treatment extending over several months, the bronchocele was cured, and the action of the vocal cords became natural.” In this case the isthmus of the thyroid does not appear to have been large. Sir Duncan Gibb was first led to suggest the feasibility of removal of the isthmus by observing “several cases of enlargement of the thyroid gland affecting one or both of the lateral lobes and implicating the isthmus.”† In 1870 a post-mortem examination on a young man enabled him to prove that in some cases, “if not relieved by treatment, the lateral lobes, which in their enlargement sometimes spring from the isthmus itself, may extend on either side of the trachea itself and completely encircle it. The consequence of this is that the tube is compressed laterally and its form becomes oval, with a very narrow passage to breathe through, which sooner or later ends fatally.” In 1874 Mr. Holthouse operated on two females for Sir Duncan Gibb with the happiest results. In each case the trachea was greatly compressed, and relief was speedily manifested. In 1883 Mr. Sydney Jones reported in the *Lancet* a case of “enlargement of the thyroid gland in a male producing pressure on the trachea and serious attacks of dyspnea: removal of isthmus: atrophy of lateral lobes: cure.”‡ In this case the patient was a laborer, aged eighteen years. The duration of symptoms was for seven or eight years. The patient was quite well in less than two months. Mr. Sydney Jones’ brilliant series of cases have shown us that, in the words of Sir William MacCormac, it is “a method of treatment which is comparatively simple, easy of execution, and promises excellent results in suitable cases;” and, further, that where the symptoms are produced by an innocent enlargement of the thyroid without an hypertrophied isthmus, removal of portions of the lateral lobes encroaching mesially on the trachea may be done quite as safely and with the same beneficial results as in those cases where the isthmus alone is excised.

In all the cases referred to, the author has been unable to find any reference to laryngoscopical examination. The pressure, judging from the speedily successful results, must have respected the recurrent laryngeals, and the “scabbard-like” condition of the trachea readily accounted for the whole of the dyspnea, whereas in this case six months had elapsed before the patient was obviously much better. Nor could we reasonably have expected more speedy results, seeing that laryngoscopically the dyspnea could be readily explained by pressure on the recurrent laryngeals producing the abductor palsy.

STCLAIR THOMSON.

† *The Lancet*, January 23, 1875, p. 120.

‡ *The Lancet*, November 4, 1883, p. 900.

Pott's Disease; Death Caused by an Abscess in the Thorax—WHITMAN—*Amer. Practitioner and News*, February, 1899.

A boy of four years, with an angular projection of the fourth dorsal vertebra, suffered from paroxysmal dyspnea. In spite of treatment the patient died suddenly. The autopsy showed a dense fluctuating tumor the size of a large hen's egg between the esophagus and the anterior longitudinal ligament, on a level with the upper border of the third dorsal vertebra.

SCHEPPEGRELL.

Broncho-Pneumonia from the Inhalation of a Foreign Body—H.MORELL—*N. Y. Med. Journal*, March 11, 1899.

A child of eight months inhaled a peanut. It became cyanotic with increased rapidity of respiration, and within 24 hours had the first symptoms of broncho-pneumonia. After three or four days the symptoms subsided, but the left side of the chest did not clear up. Six weeks later the peanut was expelled during a paroxysm of coughing and vomiting, and the child made a rapid recovery.

SCHEPPEGRELL.

Uric Acid as a Cause of Asthma—L. H. WATSON—*Southern Med.**Record*, February, 1899.

The author favors the theory advocated by Haig and others that asthma represents the effects of uric acid on the circulation in the thorax, and that it is paroxysmal for the same reason that epilepsy and migraine are so, in accordance with the natural fluctuation of the uric acid and the amount of substance passing through the circulation. He quotes a case cured and another improved by treatment based on this theory.

SCHEPPEGRELL.

On the Treatment of Tracheal Stenosis—SCHULZ—*Berl. Klin.**Wochenschr.*, No. 29, 1899.

This interesting paper is taken up in describing in detail the treatment and progress of a case of tracheal stenosis which occurred eleven years after a tracheotomy. The means which led to a dilatation were the use of catheters at first, and afterwards of silver spiral tubes made for the case. Under the continued use of these instruments the opening has become twice as large as when the patient first presented himself for treatment, and all symptoms of dyspnea have disappeared.

VITTUM.

Strictures of the Esophagus and Cardia—LAMBOTTE—*Presse Méd.*,

February 11, 1899.

The methods in vogue resolve themselves into catheterism, intubation and gastrotomy. Catheterism is not a prudent measure, as it is painful, ineffective and may cause perforation at any time. Intubation by means of a rubber or metal sound large enough to allow the passage of food and introduced from above with esophageal forceps, or upward from the stomach, is more rational.

SCHEPPEGRELL.

Report of Cases Treated with Paquin's Antitubercle Serum—J.R. BRIDGES—*Charlotte Med. Journ.*, March, 1899.

A report of four cases with apparently good results. The author, however, believes very properly that hygienic, sanitary and dietetic measures should not be neglected, and he even recommends the internal administration of cod-liver oil and creosote.

SCHEPPEGRELL.

Cartridge in Right Bronchus—W. A. MOFFATT—*British Medical Journal*, March 4, 1899.

C. K., aged seven, was admitted for slight dyspnea and cough. Eight days previously he had been throwing up a pistol cartridge and catching it in his mouth, when he fell just as the cartridge got into his mouth.

With the X-rays and screen a foreign body was seen to the right of the spine.

A low tracheotomy having been performed the cartridge was felt by the aid of a stout piece of silver wire in the right bronchus and was removed with a pair of nasal polypus forceps having a crocodile mouth. Patient made a good recovery, and when discharged from the hospital, breath, sounds and resonance were normal.

FOX-CROFT.

Report of a Case of Accidental Swallowing of a Brass Wire, and its Spontaneous Escape from the Stomach through the Ninth Intercostal Space—W. J. GILLETTE—*N. Y. Med. Journ.*, March 25, 1899.

While a physician was swabbing his own throat with a probang of brass wire, six inches in length, it accidentally slipped out of his fingers and passed into the esophagus. As it gave rise to no disturbance, no attempt at removal was made. Three months later the patient began to have distress in the epigastrium, and a month later the end of the probang was found protruding from under the skin in the ninth intercostal space near the costal cartilages. It was removed with forceps, the patient making a good recovery.

SCHEPPEGRELL.

V. EAR.

Physiology of the Auditory Organ—DR. GUSTAV ZIMMERMANN—*Muenchener Med. Wochenschr.* May 9, 1899.

In this paper the author advances a theory as to the functions of the drum membrane and the ossicles. His argument against the old and generally accepted theory of Helmholtz is, first that extensive destruction or thickening of the drum membrane often seems to cause only a very slight diminution of hearing. The malleus and incus may be removed at times with positive benefit; and even the loss of the stapes does not necessarily mean deafness, provided that no labyrinthine or nervous disease is present.

Furthermore, Helmholtz's view demands that each terminal fibre of the acoustic nerve shall correspond with a hair-cell. This is disproved by modern histology. Again, by no means within our reach is it possible to demonstrate the vibration of the drum membrane as a whole during the act of hearing. In fact it seems impossible that such should be the case, except in some very low tones where the sound waves are far apart. Another objection is that the little striated muscles attached to the malleus and stapes must forever be in action both day and night, if the chain of ossicles is really thrown into sympathetic vibration by the sound waves. Z. casts to the winds utterly the idea that the drumhead and the chain of ossicles are to be considered as a conducting apparatus, and considers them as a beautiful device for regulating the intra-labyrinthine pressure. The fenestrum rotundum, with its elastic membrana secundaria, is to be considered as a sort of escape valve for the labyrinthine fluid under conditions of high momentary pressure. The fenestrum ovale, on the other hand, serves as an opening through which the plate of the stapes may bring pressure to bear on the same fluid. Now if a sudden and severe concussion takes place, the tensor draws the stapes markedly inward so that the labyrinthine fluid is under high pressure and incapable of conveying those extreme vibrations which would shatter the delicate structures of the internal ear as with a blow. In other words, the ear is for the moment perfectly deaf, and this reflex action of the ear has saved it from destruction. In case the stapes is not drawn inward to its fullest extent then the intra-labyrinthine pressure is not so great and the sound-perceiving fibres are not rendered incapable of all vibrations but are only dulled in this activity. This is of importance in the matter of those tones which are caused by sound waves which are relatively far apart—low tones. If this apparatus were not provided, we should, in the case of these low tones, have a prolongation of the tone perception and consequently confusion and the perception merely of a noise.

After giving his explanation of the Webber and Rinne experiments, the author draws the following conclusions:

1. The drum membrane and the chain of ossicles in conducting sound are subjected only to molecular vibration.
2. The drum membrane and the chain of ossicles act as a beautiful reflex regulator: while the fenestrum rotundum acts as an automatic valve.
3. There is only one form of sound conduction to the labyrinth—bone conduction. This may be direct from the source of the sound (tuning fork), or indirect through an interposed medium (column of air).

VITTUM.

Influenza and Otitis Media—F. ASHTON WERNER—*British Medical Journal*—May 13, 1899.

The importance of blood letting, by leeches to the affected part, is emphasized in the treatment of middle-ear trouble complicating influenza together with hot boracic fermentation. FOXCROFT.

Cotton Ear Drum in Suppurative Cases—D. B. HASELTINE, Chicago—*The Clinique*, May, 1899.

The author has found the cotton ear drum useful in a number of cases, both as a mechanical device to improve the hearing and as a stimulant to the regeneration of the perforated drum membrane.

In a case of twelve months' standing, with a perforation involving one-third of the drumhead, complete closure followed at the end of three weeks, with a hearing of $\frac{3}{8}$ for the watch.

In a case of thirty years' standing, with entire loss of membrane on one side, but the ossicles still in position, immediate improvement in the hearing followed the placing of a cotton pad. But, although complete reformation of the membrane took place, it was not permanent.

STEIN.

Treatment of Acute Otitis Media Following Influenza—THEOBALD—*Va. Med. Semi-Monthly*, March 24, 1899.

In the early stage when the pain is pronounced, atropia and cocaine are used externally, and one grain of atropia sulphate and two grains of cocaine muriate in two drams of distilled water are used, eight drops being poured into the ear three or four times per day. More recently an oily solution of the alkaloids of atropia and cocaine were found more useful. He sometimes found this efficient when others would have resorted to myringotomy. When an incision is indicated, it should be made freely, beginning with the upper posterior border and carrying it down parallel with the posterior line.

SCHEPPEGRELL.

Otology and Rhino-Laryngology Up-to-Date B. F. CHURCH—*South. Cal. Pract.*, Vol. xiv, No. 6, June, 1899.

A review of advances in these departments. Among others the author mentions the microscopical examination of the discharge of otorrhea for streptococci as an aid to prognosis; the abandoning, to a great extent of intratympanic operations in chronic non-suppurative otitis media; the reaction against the use of the galvanocautery in the nose; the connection of the anterior ethmoid cells and the frontal sinus with the antrum of Highmore; the use of steam for empyema of the frontal sinus, and the use of a weak solution of formalin in tuberculous laryngitis.

EATON.

Chronic Middle-Ear Suppuration with Permanent Retroauricular Opening—E. B. GLEASON—*Journ. Am. Med. Assn.*, June 10, 1899.

Two cases of operation by Passow's method are presented. The advantages claimed are that the middle ear becomes a "skin-lined, non-secreting" cavity. The permanent retroauricular opening allows free access of air to the middle ear and greatly facilitates cleansing the cavity when necessary.

ANDREWS.

Progress in Otology—T. MELVILLE HARDIE—*Journal American Medical Association*, June 3, 1899.

In reviewing the progress in otology the writer gives a short account of the early history of otology in America, and mentions many recent books on the different branches of the subject. Considerable activity on the part of American otologists is noted.

ANDREWS.

"Deaf Mutes," with Clinic—MAURY M. STAPLER, Macon, Ga.—*Journal Am. Med. Assoc.*, May 27, 1899.

A case of congenital narrowing of the pharyngeal opening of the Eustachian tubes, in a lad of eighteen years: showing aerial conduction negative as to the right ear, but "he could hear very loud tones thrown from a near point directly into the left ear." Bone conduction was unimpaired. Hearing has improved to four to six inches for the watch. He can hear ordinary conversation and use the telephone; can count and knows denominations of money. Treatment consisted in the electro-cauterization of the anterior margin of the pharyngeal mouth of the Eustachian tubes, thereby causing cicatricial contraction of the mucous lining, and also shortening some fibres of the tensor palati.

STEIN.

Marriage Among the Deaf—*American Annals of the Deaf*.

An editorial in *The Journal of the American Medical Association* of June 24, 1899, quoting *The American Annals of the Deaf*, says that marriage among the deaf is greatly increasing. There is a tendency on the part of the deaf to marry one another rather than hearing persons.

A smaller percentage of marriages result in deaf offspring when both parents are deaf than when only one is deaf.

Further observation and more statistics will be necessary before statements like the last can be fully authenticated.

ANDREWS.

Bilateral Deafness in Connection with Paralysis of the Palate—

ALFRED BRUCK—*Berliner Klin. Wochenschr.*, May 29, 1899.

At a meeting of the Berlin Medical Society, held May 3, the author presented a patient who became rather suddenly deaf about three months before. An examination revealed an exudative middle ear catarrh. During the examination the author noticed a peculiar nasal twang to the voice and on investigation found a paralysis of the soft palate. The deafness and the change in the voice were stated to have begun at about the same time. The author thinks that the paralysis of the palate was the cause of the ear trouble. The palatal muscles, one of whose functions it is to open and close the tube, being paralysed, a condition of negative pressure was developed, followed by a *hydrops ex vacuo*.

VITTUM.

Uncommon Cases of Operation on the Brain—JAMES NICOLL—*Lancet*, October 29, 1898.

One of these cases is interesting as showing the origin of a malignant tumor in the middle ear. The symptoms simulated temporo-sphenoidal abscess. An intracranial portion of the tumor was removed, with relief to the pressure symptoms. The patient died two and a half months afterwards.

STCLAIR THOMSON.

A Case of Mastoid Suppuration with Hyperperexia and Jaundice; Operation; Recovery—T. HARRISON BUTLER—*British Medical Journal*, May 13, 1899.

Patient, a girl, aged eleven, had been playing in the hot sun, the day previously had had an attack of vomiting, and a week previously had a fall on the head. Her temperature was 108°, pulse 180 and very feeble but regular. There was no loss of consciousness, she complained of headache. There was marked tenderness over the left mastoid and along the whole course of the internal jugular vein. There was pus in the left external meatus which was not offensive. The antrum was opened and a pin connection made with the middle ear, a drop of pus being found in the antrum. Exploration of the lateral sinus showed contents normal. The wound was irrigated with binoxide of mercury solution, 1 in 2000, and plugged with 20 per cent iodoform gauze. The day after the operation the temperature was 99.4 but rose in the evening to 108°, an hour later it dropped to 100.2°. The next day the temperature again rose to 107.2°, but fell and remained normal, with the exception of one rise to 105 the following day, for the remainder of the convalescence. There were no rigors, nor vomiting, nor cerebral symptoms. The spleen was enlarged and patient was jaundiced for a few days.

The case offers many difficulties and unusual points. The thermometer used was tested with a Kew-certified instrument and found to be accurate. The question arises how far the temperature was influenced by exposure of the patient to a semi-tropical sun and how far it was due to absorption of septic products. The absence of rigors and sweating, and the complete recovery seem to be negative to the view that there was general septic infection in spite of the fact that the spleen was enlarged and that jaundice occurred. The case is interesting as showing that marked jugular tension may exist in mastoid cases though the lateral sinus be quite normal. The absence of cerebral symptoms formed a marked feature of the case. It must not be forgotten that in South Africa temperatures run higher than they do at home without the same significance.

FOX-CROFT.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Differential Diagnosis and Treatment of Diphtheria—JAS. P.

COBB—*The Clinique*, June 15, 1899.

Bacteriological examination should be made in connection with the clinical examination. This examination should be repeated if the first test does not reveal the specific bacillus. In the writer's experience no second attack of diphtheria had occurred in persons who had undoubted diphtheria.

The symptoms are given at length, but nothing new is added. In treatment, antitoxine and alcohol hold first place. Antitoxine should be given early, the use of it after the completion of the third day being unsafe.

DETWILER.

Observations on the Use of Antitoxin in the Treatment of Diphtheria, Based on Experience with Sixty-nine Cases—

M. A. ALBE, Cleveland, Ohio—*The Cleveland Medical Gazette*, June, 1899.

The author arrives at the opinion that every suspicious case of sore throat should receive an injection of antitoxin at once, and make the bacteriological examination afterwards. Most all cases are of mixed infection. A child of one year can stand as much antitoxin as a child of ten, conditions being equal.

Of these sixty-nine cases treated, all but seven recovered, these died. Two received three injections of 1,000 units each, every six hours, until effect was obtained.

Six received two injections of 1,000 units each, every six hours.

Eight received 1,500 units at first injection.

Six received a single injection of 1,000 units.

The disease in all cases was controlled within twenty-four hours.

Five required intubation and all recovered.

In addition to the antitoxin some general and local treatment was carried out.

STEIN.

The Essential Points in the Treatment of Diphtheria—JAS. G.

BRUBAKER—*Med. Age*, June 25, 1899.

The antitoxine treatment is unqualifiedly indorsed. The serum should be used early for protection and treatment in doses ranging from 200 to 2,000 units. The dose should be repeated in 24 to 48 hours, if indicated. Antiseptic, non-irritating mouth and throat washes, such as Löffler's solution, should be used, and mercurials and tincture of iron should be given internally. Alcohol is to be given freely. Inhalations of steam are of value if the larynx is invaded. No effort should be made to detach the membrane. When preparing for intubation also prepare for tracheotomy, as the tube may detach the membrane. The membrane may invade the bronchi and cause failure of the operation. The same treatment should be followed in clinical diphtheria though the specific bacillus cannot be found.

DETWILER.

The Clinical Application of the Bacteriology of Diphtheria—W.

H. WILSON—*The Clinique*, June 15, 1899.

The writer divides cases of sore throat into staphylo-angina, strepto-angina and Klebs-Löffler-angina, determining the nature of the affliction by the bacteriological examination of the germs present. Bacteriological examination is necessary because of the clinical symptoms in common produced by the various pathogenic germs.

Antitoxine is of value in true diphtheria, Klebs-Löffler angina, but of no service in diphtheroid cases. DETWILER.

The Diphtheritic Bacillus—Its Persistence in Mouths of Convalescents—H. L. RUSSELL—*Journ. Am. Med. Assn.*, June

24, 1899.

Three cases are reported in which frequent examinations were made, and virulent bacilli were found from two to four months after the attacks of diphtheria. The importance of bacteriological examination of convalescents is emphasized.

The author believes that the persistence of virulent bacilli in the throats of convalescents is the cause of many of the so-called sporadic outbreaks of diphtheria. ANDREWS.

Diphtheria and Intubation—C. C. FURLEY—*Kan. City Med.*

Index-Lancet, Vol. xx, No. 235, July, 1899.

The writer maintains that tracheotomy is the proper operation in those cases formerly known as membranous croup, and that intubation is more apt to aggravate than cure that class of cases where the inflammation extends to all parts of the bronchial ramifications and the stenosis does not exist in the trachea alone. EATON.

A Year's Work in Intubation—C. W. RICHARDSON—*The National Medical Review*, June, 1899.

A tabulated report of thirty-one cases of laryngeal, and laryngeal and pharyngeal, diphtheria requiring intubation is given. The Klebs-Löffler bacilli were present in all cases, and the stenosis was severe in all cases but two. Seven deaths occurred, a mortality of 22 per cent.

One of the cases that recovered had been intubated eighteen months prior for diphtheria, which would tend to show that one attack does not confer immunity as some hold. Antitoxine was used in connection with intubation in these cases, and the writer expressed the belief that when such treatment is given a resort to tracheotomy will not be needed. The dose of antitoxine should be from 2,500 to 3,000 units for children over two years of age, and for those under that age from 1,500 to 2,000 units should be given.

He found most difficulty in intubating children between eighteen and thirty-six months of age, but could assign no reason for this. In these cases the tube is allowed to remain until the fifth or sixth day. The paper was discussed at length. DETWILER.

Some Experiences with Intubation—F. E. SAMPSON—*Med. Herald*, Vol. xviii, No. 6, June, 1899.

The author relates in graphic style some accidents and vicissitudes in the performance of intubation. Experience has taught him that exhausted, nearly moribund patients are best intubated in the prone position. Resistance, also, on the part of the patient may play a prominent part, as also the irritation of the fauces incident to the introduction of the tube. Leonard has found the operation quite as easy with the patient on a couch or low bed as in the usual position.

He inclines to the opinion that in cases so far gone as to be unconscious, tracheotomy should be done at once without losing any time on intubation, as the rather free bleeding incident to a rapid tracheotomy is surely no disadvantage to the distended heart. When breathing is well established, the trachea and bronchi well cleared, intubation may be done and the tracheotomy wound closed. The author closes with the statement that it is his conviction that the technique of intubation should be a part of the training of every physician. Within the past three years there have been to his knowledge in the country and towns adjacent to Creston, Iowa, eight deaths from laryngeal diphtheria where intubation was not done because the services of an intubationist were not available.

EATON.

Membranous Croup (so-called) and Diphtheria—I. A. MCSWAIN—*Charlotte Med. Journ.*, March, 1899.

Diphtheria and membranous croup should be regarded as identical. Antitoxin is a rational, scientific and indispensable remedy, and should be administered early and in full doses.

SCHEPPEGRELL.

Differential Diagnosis of Diphtheria from Membranous Croup—

T. T. FERREE—*Charlotte Med. Journ.*, March, 1899.

The author appears to believe that the severity of the disease is the important factor in the differentiation. He makes no reference to the bacteriology of the subject.

SCHEPPEGRELL.

Surgical Intervention in Basedow's Disease—P. J. MÖBIUS—*Presse Méd.*, March 4, 1899.

Six cases of Basedow's disease were cured and four improved by extensive and total resection of the three ganglia of the cervical sympathetic on both sides. This operation is especially effective in the primary form of Basedow's disease, but less satisfactory in the secondary. The resulting improvement is usually very slow.

SCHEPPEGRELL.

Diphtheria—L. R. SELLERS—*West. Med. Journ.*, Vol. xi, No. 5, May, 1899.

Contains nothing new.

EATON.

Diphtheria Antitoxin in Private Practice—E. C. BOUSFIELD—
Lancet, December 10, 1898.

This is an earnest appeal to use antitoxin immediately in every clear or doubtful case of diphtheria, as the author feels assured that in no other way is it possible to seriously diminish the mortality. Even the delay of sending the cases into hospital, before administering the serum, leads to a decided increase in the mortality.

STCLAIR THOMSON.

A Peculiar Case of Post-Diphtheritic Cicatrization—ALFRED
BRUCK—*Berl. Klin. Wochenschr.*, No. 31, 1899.

The case in question seemed to present a complete absence of the right posterior pillar of the soft palate. A careful examination revealed an extensive cicatricial condition of the whole post-nasal space. This had resulted in almost complete obstruction of both choanæ, to a partial adhesion of the soft palate to the posterior pharyngeal wall. The membranes closing the choanæ did not reach quite to the lower border and communication between the nose and throat was permitted by small round openings, of which one was situated in the right choana, while the left possessed two. This explains why the patient was able to breathe more freely through the left nostril than through the right. There was marked atrophy of the pharyngeal mucous membranes and polyps in the right nostril, plainly the result of the continued irritation. The ears, too, were affected, the Eustachian openings being drawn into the cicatricial mass. The drumheads thick, strongly retracted and injected. Finally, the apparent absence of the posterior pillar is intimately connected with this general cicatrization. In regard to the cause: syphilis could be absolutely excluded. The patient at the age of three years had had an attack of what was probably diphtheria. Here is apparently the cause: for while such cases of cicatrization are somewhat rare, they are by no means unheard of, and the author cites instances from the practice of Krause, Heymann, Gerber, Flieschmann and Borchard.

VITTM.

Tumors of Esophagus—Report of Liverpool Medical Society in
British Medical Journal, February 4, 1899.

Dr. Permewan described two cases of tumors of the esophagus which he had removed by subhyoid pharyngotomy. The first case, in which the growth was benign, died from the immediate effects of the operation; the second recovered. Dr. Permewan stated that the conclusions he had arrived at with regard to this operation were (1) that subhyoid pharyngotomy was justifiable in spite of the large percentage of cases in which death occurred after this operation: that it was admirably adapted for the removal of growths from the lower pharynx, upper part of the esophagus and also from the upper aperture of the larynx. As a preliminary to resection of the larynx it was valuable, giving a more complete view than that obtained by thyrotomy; (3) that to ensure a safe operation a preliminary tracheotomy was necessary; (4) that no attempt should be made to close the wound after operation, but that it should be plugged with gauze and allowed to granulate; (5) that feeding should be by the esophageal tube exclusively.

FOX-CROFT.

VII. INSTRUMENTS AND THERAPY.

A New Intubation Instrument—CHARLES J. WHALEN, Chicago—*Journ. Am. Med. Assn.*, June 24, 1899.

The instrument as illustrated combines the introducer and extractor in one instrument. It is similar in principle to the French intubation instrument, but has longer blades for holding the tube and has a greater curve, the better to enable the operator to insert the instrument in extracting the tube. ANDREWS.

The Uses and Abuses of Cocaine—EDITORIAL—*Tex. Medical News*, February, 1899.

A review of the therapeutic value of cocaine and some of the effects of its abuse.

[The author concludes, however, by giving a formula for the use of cocaine in cases of hay fever, which, if placed in the hands of the patient, would certainly tend to increase the cases in which this useful but dangerous drug is abused. Many of the most severe cases of cocainism owe their origin to a prescription of this kind.—S.] SCHEPPEGRELL.

Extract of Supra-Renal Capsule—J. C. CONNELL—*Kingston Medical Quarterly*, Vol. iii, No. 4.

Taking gr. v of Armour's desiccated extract to each drachm of water, the solution is well shaken and allowed to stand for ten minutes and then filtered three times. Decomposition is retarded by adding 25 per cent of glycerine, but the activity of the drug is weakened thereby. Its use renders nasal operations almost bloodless, and is recommended for the relief of congestive conditions in the pharynx and larynx. GIBB WISHART.

The Modern Treatment of Diseases of the Nose—A. H. HERZOG—*Int. Journ. Surg.*, Vol. xii, No. 6, June, 1899.

This paper is mainly a statement of the medical treatment of nasal catarrh now in vogue. The advice of the author to use nitrate of silver, and the nasal douche (by the patient), is not modern treatment.

His proposition also, to "seize a hypertrophied turbinated bone by means of a polypus forceps, and to remove the obstruction in this way by breaking or tearing it away," is, in the abstractor's opinion brutal and unsurgical. EATON.

On the Treatment of Tonsillitis—J. E. KEMPF—*Louisville Med. Journ.*, March, 1899.

To a pint of freshly prepared chlorine water a dram to an ounce of muriated tincture of iron is added. This is used locally by means of an atomizer, and, internally, a teaspoonful every two or four hours. The author has had good results from this form of treatment. SCHEPPEGRELL.

Dry Bronchitis with Paroxysmal Dyspnea—EX.—*Riforma Medica*, February, 1899.

The following is recommended:

℞ Alcoholic sol. of nitroglycerin (1 per cent)	Mi
Alcoholic nitrate ether	fl. ʒiv
Sol. chloroform in alcohol (10 per cent)	fl. ʒii
Dist. water.....	fl. ʒiv

SCHEPPEGRELL.

The Medical Efficacy of Nosophen and Antinosine in Eye, Ear, Nose and Throat Affections—J. A. LYDSTON—*Denver Med. Times*, Vol. xix, No. 1, July, 1899.

The general excellencies and convenience for use of the two substances are described, as well as their chemical, and antiseptic qualities. Cases are described illustrating their use in mastoid disease, and it is claimed that catarrhal cases of the nose and throat have in many cases yielded to insufflations of nosophen, and irrigations with aqueous solutions of antinosine.

EATON.

The Therapeutical Value of Paraldehyde—JOHN V. SHOEMAKER—*Merck's Archives*, May, 1899.

Paraldehyde is eliminated largely by the lungs, imparting a characteristic odor to the breath. Its antiseptic local effect upon the cells of the lungs and the mucous membrane of the bronchial tubes is advantageous, as it changes the quality of the inflammatory products and secretions and diminishes their amount.

Paraldehyde produces sleep without any injurious aftereffects. It diminishes dyspnea and tranquilizes respiration and cough, being particularly useful in the insomnia and cough of pulmonary tuberculosis. In spasmodic asthma the attacks can be prevented or mitigated by it. In the latter disease the patient should have a dose of the drug as soon as he feels an attack coming on. The dose is from twenty drops to one dram.

The maximum dose may usually be given safely twice a day.

JEFFERS.

On the Use of Rubber Splints in the Treatment following Intra-Nasal Operations—J. PRICE BROWN—*Canadian Practitioner*, Vol. xxv, No. 7.

Catarrhal difficulties caused by obstruction will be in a great measure removed if only a clear open chink be made wide enough to prevent accumulations of mucus between the turbinates and the septum without resorting to fracturing or straightening the septum itself. The writer has found it difficult to procure smooth equable pressure upon the necrosed tissues during the process of healing after the removal of spurs. The use of rubber splints made from thick rubber sheeting, cut to any size and thickness, is advocated when the chisel is a narrow one. These splints prevent granulations, and mould the tissues into a smooth and regular form. These splints should not be perforated, as they would fail to exercise equable pressure and would fail to be aseptic.

Reports are given of five cases treated in this way.

GIBB WISHART.

BOOK REVIEWS.

An Inquiry Concerning the Results of Marriages of the Deaf in America. By Edward Allen Fay, Vice-President and Professor of Languages in Gallaudet College, Editor of the *American Annals of the Deaf*. Preface by John Hitz, Esq., Superintendent of the Volta Bureau. Octavo, pp. 530, cloth. Published by the Volta Bureau, Washington, D. C., 1899.

This volume contains a statistical collection and tabular statement of marriages of the deaf in America, and includes a consideration of the following questions which are of especial interest and importance to the deaf as a class, and to the profession who come in contact with this class of patients:

1. Are marriages of deaf persons more liable to result in deaf offspring than ordinary marriages? 2. Are marriages in which both of the partners are deaf more liable to result in deaf offspring than marriages in which one of the partners is deaf and the other is a hearing person? 3. Are certain classes of the deaf, however they may marry, more liable than others to have deaf children? If so, how are these classes composed, and what are the conditions that increase or diminish this liability?

Aside from the question of the liability of the offspring to deafness, are marriages in which both of the partners are deaf more likely to result happily than marriages in which one of the partners is deaf and the other is a hearing person?

"These questions have been much discussed both at home and abroad, and the conclusions reached differ widely. Some writers maintain that marriages of the deaf are far more liable to result in deaf offspring than ordinary marriages, and that this liability is greatly increased when both of the partners in marriages are deaf; others maintain that such marriages are but little more liable to result in deaf offspring than ordinary marriages, and others that they are not at all more liable."

All of these conclusions are set forth in detail, together with the statistics bearing on the subject, and the material collected for the publication of this volume may be considered of inestimable value to the deaf, to science, and to the community at large. G.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. F. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology, Jefferson Medical College, etc., etc. Third edition, thoroughly revised; 696 pages with 255 illustrations and two chromo-lithographic plates. W. B. Saunders, Philadelphia.

The revised and enlarged edition of this popular work is destined to receive the favorable consideration of both practitioners and students, as it is thoroughly scientific and up-to-date. A discussion of the general principles of optics, methods of examination, instrumentation and refraction is followed by consideration of diseases of the ocular appendages, the eyeball and orbit in a logical order—special attention being paid to the relation of micro-organisms to ocular disorders—the volume closing with a well-written chapter on operative procedure and an appendix on the use of the ophthalmometer and trypometer. R.

The Mechanics of Surgery. Comprising detailed descriptions, illustrations and lists of the instruments, appliances and furniture necessary in modern surgical art. By Chas. Truax, Chicago. Octavo, 1,024 pp., 1899.

This unique volume is a new departure in medical publications. It embodies a description together with illustrations of the most important and most popular instruments used in every field of surgical science, and the author from his association with the manufacturer of the surgical instruments and appliances, his extensive acquaintance with the medical profession and attendance at clinics in many parts of the world, seems specially qualified to place such a volume before the medical profession.

It will be found a valuable reference volume of its kind and offers a vast store of information to even the most progressive members of the profession.

It brings the manufacturer of surgical appliances to the notice of the profession in a distinctly ethical and genteel manner. G.

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ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

ENDOCRANIAL COMPLICATIONS OF OTIC ORIGIN.

TWO CASES OF CEREBRAL ABSCESS.*

BY DR. E. J. MOURE, BORDEAUX, FRANCE.

Translated by

STCLAIR THOMSON, M.D., LONDON, ENG.

Since otology has become more surgical we have from time to time the opportunity of observing ear complications developing in the cranial cavity. As this part of pathology still requires clearing up, we think it is the duty of all surgeons to report the facts they have the opportunity of observing, so as to collect the material wherewith to build up a solid edifice of knowledge on a series of observations. In this way we will be able to elucidate various cerebral complications originating from the ear. At the present moment we must confess they present numerous difficulties of diagnosis.

Indeed, except in the cases where lesions are situated in parts of the brain which react externally (motor or other centers), the symptoms are often so vague and so various—sometimes even so slight—that it is impossible for the clinician to make a positive diagnosis, and, above all, to settle the moment for surgical interference. In certain cases, indeed, particularly in extra-dural abscesses, we doubtless look on at large collections of pus forming round the brain without the patient experiencing any symptoms other than a slight malaise or intermittent headache, sometimes a little torpor following

* Paper read at the Sixth International Otological Congress, London, August, 1899.

on compression. But these different signs are far from being sufficient for warranting interference by the surgeon if he was not impelled by other circumstances, such as a chronic otorrhea or a fistulous tract, which led him during the operation to the extra-dural region.

In another series of cases the patient manifests a certain number of symptoms which indicate that the encephalon is affected in some part. When, at the operation, starting from the ear trouble, we arrive at the dura mater, and find at this level a collection of pus, it is customary to there limit our interference, being convinced that what we have found is sufficient to explain the symptoms exhibited by the patient before the operation. Very often, then, after the opening of this extra-dural abscess, the operator sees that the cerebral phenomena continue or even become worse; his intervention has not been sufficient, and it is not always advisable for him to resume it, especially when he has to do with private patients. However, if we have no distinct signs of localization, is it logical to deliberately open the meninges and puncture the brain, thus exposing the patient to an infection which did not exist beforehand—particularly when we have found a considerable extra-dural lesion in connection with the aural lesion? For if the symptoms continue after an operation of this kind it might be asked, unless one finds pus from the cerebral puncture, if the complications existed beforehand or if they had not been the sequence of a surgical infection? The following case is interesting from this point of view. The first operation only relieved the patient for a short time, then the phenomena continued to be more marked, and even more limited, showing that one had to do undoubtedly with an encephalitic lesion. The family refused a second operation.

Case I. Reported by Dr. A. Brindel (First Assistant in the Otological Clinic at Bordeaux). Cerebral Abscess Consecutive on a Chronic Otorrhea, Complicated with Influenza. Stacke's Operation. Extra-Dural Abscess. Very Marked Improvement. Five Days Afterwards Fresh Cerebral Symptoms, Causing Death in Forty-eight Hours. Refusal by the Family of a Second Operation.—M. M., age fifty, has an old-standing suppuration in the left ear. Influenza one month previously. For twelve or fourteen days acute, sharp pain in the mastoid region. Cerebral symptoms for four days—delirium, fever without remission, up to 40°C. and intense headache on the side affected. For two days the patient is half comatose, with profuse perspirations. Pressure on the mastoid at the level of the antrum is very painful. Unilateral facial paralysis on the side affected.

Patient was seen for the first time on November 5th. Operation was decided upon at once, but could not be performed before November 7th.

Operation, November 7, 1898.—Incision in the retro-auricular furrow, petro-squamosal suture very marked. The bony meatus was enlarged in its superior half by means of the gouge and mallet. The first layers of tissue did not appear hard, but considerable hardness in the apophysis. With one blow of the gouge the external surface of the lateral sinus was exposed. It was not more than one centimeter and a half distant from the back of the meatus. In one of the mastoid cells on the inferior walls of the mastoid opening pus was found. The antrum was thoroughly exposed. It was small, placed high up, and it, as well as the tympanum and the tympano-mastoid canal, was full of caseous and fungating material. *The roof of the antrum and of the tympanum no longer exist.* The bony wall was destroyed to a considerable extent. *Pus and fungating material were found on the meninges.* After curetting, they appeared to be still resistant, and the operation was not carried further. Careful curetting of the large cavity formed by the antrum, the epiphysis, the tympanum and the tympano-mastoid canal. The membranous meatus was slit in its whole length at its center. The inferior flap thus formed was fixed by a cat-gut suture. The upper flap was entirely removed, the retro-auricular wound was immediately closed and the meatus plugged with iodoform gauze.

November 7th, Evening.—Intelligence commenced to return. Temperature 38°C.

November 7th–10th.—Intelligence returned; no fever.

November 10th.—The patient begins to take an interest in his own condition. No headache. Facial paralysis continues. General condition good. Dressing renewed. No pus.

November 11th.—Patient feels well. Got up and commenced to eat with appetite.

November 12th.—Suddenly during the night of the 11th to the 12th the delirium appeared again and also the coma. Patient frequently carried his left hand to his head over the dressing. He does not answer any question. In the evening he is still comatose: respiration 31, pulse 100, temperature 39.2°. *The right arm is distinctly and strongly paralytic. Incontinence of urine.* Wound dressed. No pus. Respiration stertorous.

November 13th, 1 p. m.—Same condition. Right arm completely paralyzed. Uneasy respirations. 51. Pulse 147. Coma. The pupils react a little to light. Patient evidently suffers from his head.

A second operation was proposed, which would have consisted of craniectomy at the level of the temporal lobe and one or more exploratory punctures of the brain, for we thought that we had to do with all the symptoms of a cerebral abscess.

The family, though very intelligent, refused the second operation, although warned even before the first operation that it might be necessary.

The patient died on November 14, 1898. No post-mortem.

I might compare with this case another which I have already published in which the extra-dural lesion (an abscess) was emptied, but improvement did not follow, and I did not have the opportunity of operating a second time, as the patient died after forty-eight hours from an enormous abscess in the brain, which I discovered at the post-mortem.

The duty of a surgeon in cases of intra-cranial complications (phlebitis excepted) may, however, be sometimes very difficult to determine. Indeed, as I have already remarked, when an affection of this character is suspected and an operation performed one has to settle whether in the absence of all symptoms of localized cerebral trouble, and *sometimes even when they are present*, one has to settle, I repeat, whether the existence of an extra-dural collection or of a meningeal origin easily diagnosed ought to stay the surgeon's hand, or if, on the contrary, he ought, in spite of the existence of these extra-dural lesions, to push his operation still further. It seems logical to admit that, as a rule, it is the second hypothesis that a wise surgeon ought to adopt, being prepared to continue his operation twenty-four or forty-eight hours afterwards if the symptoms do not amend as they should do if only a single lesion existed.

It appears to me that our rule of action ought to be the same both in hospital and private practice, and if in the latter the patient's friends raise difficulties to a second operation, the surgeon clears his responsibility and his conscience by acting as I have indicated.

On the other hand, if the lesions found external to the dura mater are not sufficient to explain the symptoms, one must not hesitate to proceed at once to the brain to detect the cause. Sometimes this will be discoverable, but in other cases, on the contrary, in spite of the radical intervention, the symptoms will continue and end in death. It is particularly in the cases of abscess of the brain, abscess without limiting walls, that the treatment becomes difficult of application and that the opening of the purulent collection is not sufficient to effect a cure. It is a case of this character which I am now able to report. The case is interesting from several points of view. First of all

because of the symptoms which enabled us to make a clear diagnosis of cerebral abscess, and, secondly, because of the unaccustomed development which took place during the operation.

Observation II. Reported by Dr. A. Brindel (Chief Assistant in the Otological Clinic at Bordeaux). Abscess of the Brain Consequent on Acute Suppurative Otitis Media with Mastoiditis. Stacke's Operation. Puncture of the Brain. Spontaneous Evacuation of the Abscess into the Wound Ten Days after Operation. Temporary Improvement. Death on the 22d Day by Hemorrhage into the Site of the Abscess with Flooding of the Ventricle. Autopsy.

January 2, 1899.—G. L., age thirty-six, grocer, contracted a cold seventeen days previously. Took to bed with fever. Next day complained of a violent pain in the head and in the left ear. Two days afterwards discharge from the ear and relief of the earache. (Consequently this occurred fifteen days previously.)

On the sixth or seventh day after the commencement of the disease fresh earache and intense headache which have not left the patient. From this period (December 22, 1898) insomnia and loss of appetite. On December 31, 1898, commencement of intellectual phenomena: confusion of ideas; vertigo.

On the left side suppuration; small perforation in the center of the membrane; pain on pressure on the left apophysis, which is slightly raised *en masse*. No pain on percussing the cranium.

Hebetude; debility; loss of appetite; slight compression. Intense frontal headache; slight vertigo; no vomiting. Pulse 80. No convulsion. Temperature normal. 37°C.

Homonomous Hemianopsia right. Pupils equal; the pupil reacts less feebly. The papilla seems congested, and generally seems rosy. Visual field retracted. Reflexes normal; sensibility normal.

Examination by Professor Pitres.—Intellectual phenomena: word blindness; aphasia; word amnesia. On showing the patient a match box he could neither pronounce its name nor say what purpose it served. He could not name a key nor a pen, but said "It is for shutting," or "It is for writing." He recognizes a watch and knows the hour. He cannot read any writing.

He recognizes the figures 0, 8, 5. He recognizes the letter S, but not the letters T, I, M, Q, F. He recognizes the letters G, I, L, letters which go to form his name, but does not recognize his name Gilis, though formed by the letters which he had recognized separately. He succeeds, however, in reading his own name when it is formed with the same identical letters.

His repetition of words is perfect.

He writes from dictation. One gives him the word Bordeaux and then Paris. After having written the first four letters of each of these nouns he stops and it appears impossible for him to continue although we dictate the letters to him. He writes figures and the numbers 8, 25, 1899.

Spontaneous Writing.—The patient writes his own name without hesitation, but on two occasions when he wished to write Bordeaux he stopped at the fourth letter.

Writing from Copy.—When one writes out the word Bordeaux he copies it correctly.

Examination of Urine.—1033. Slight trace of albumen. Urea 27.50. Glucose 28.45, acid, phosphoric, biliary pigments.

Diagnosis.—Cerebral abscess situated at the level of the curved convolution (*pli courbe*). (Such was the diagnosis of Professor Pitres.)

The apophysis was, as remarked, slightly raised *en masse* and tender to pressure. There was a small perforation in the center of the membrane.

Operation, January 4, 1899.—Retro-auricular incision. Enlargement of the bony canal in its superior half with gouge and mallet. On the way some small cells were discovered. The bone was congested *en masse*; slightly hard; the mastoid is cellular. The antrum is put in communication with the tympanic cavity and the meatus (operation of Stacke). The roof of the antrum is necrosed; a small sequestrum separates the cavity from the encephalon. At two and one-half centimeters above and a little behind the antral opening but continuous with it, in the temporal bone, an opening is made exposing the meningeal surface in an area of about three centimeters in diameter. A crucial incision was made into the dura mater, the pia mater was incised. The point of a bistoury about three c.m. is plunged backward and a little upward into the cerebral substance, in the direction of the occipital lobe. This puncture is immediately followed by a considerable jet of venous blood as though one had made a large opening into a sinus. The blood is arrested by compression with sterilized gauze, but as it recurred at once on removing the compression we were obliged to discontinue the operation, and not to make new punctures either into the temporal lobe or into the sphenoidal lobe as we had intended. The cerebral wound was plugged, and a strip of iodoform gauze was packed into the atticomastoid cavity.

January 9, 1899.—Since the operation general condition is good, no complaint. Patient reads with pleasure, but he remains somewhat paraphasic. He does not recognize a clock.

The general sensibility is almost abolished on the right side of the body—*i. e.*, on the side opposed to the lesion. The testicular reflex does not exist on the right side. The right arm is distinctly paretic: the plug was removed. No bleeding; pulsation of the brain normal. The skin is sutured, but a small piece of iodoform gauze was left in the brain.

January 10, 1899.—Same condition except that the sensibility has returned to the right side.

January 13, 1899.—General condition good. No fever. Good appetite. Tongue dirty, but moist. The urine was again analyzed: no sugar, trace of albumen. Sp. gr., 1021.

January 15th.—The dressing was found inundated with pus which had flowed even as far as the shoulders of the patient during the night between the 14th and the 15th. The wound was healthy, the pus distinctly coming from the brain in the upper part of the incision (temporal lobe). More marked hemianopsia. The site of the cerebral abscess which had emptied itself is drained by means of a rubber drainage tube.

Since the operation the temperature has never reached 37°C.: on the morning of January 11th it was 35.2°C.

January 15th to 24th.—Patient manifestly better. Is always paraphasic, but he speaks and interests himself in everything. Knows his name; counts up to twenty; eats and gets stronger. He is dressed every other day.

January 24th.—Patient commences to complain of his dressing pressing his head. He becomes sad and depressed.

January 25th.—Dressing renewed. Large cerebral hernia. Patient bad color; tongue dirty. Answers questions; counts up to nineteen; paraphasia increased.

January 26th.—Same condition in the morning. Seven o'clock in the evening he becomes comatose and dies at 10 o'clock. This day the temperature got up to 38°C.

Post-mortem on January 27th.—There was found at the level of the curved convolution (*pli courbe*) a large collection of necrosing encephalitis (diffused abscess) in the interior of which was found a large black blood clot which extended as far as the interior of the ventricle. Above the fissure of Sylvius, and at a point corresponding to the cavity of the abscess; very superficial at this point, the pia mater is necrosed in a small situation and gives passage to pus. The temporo-sphenoidal lobes formed the hernia in the cranial wound and were affected with diffuse encephalitis.

In brief, the patient died of hemorrhage into the site of a cerebral abscess, with flooding of the ventricle.

In this case, in spite of the compression of the brain by a plug of iodoform gauze introduced into its interior, the symptoms of compression were very slightly marked the patient would probably have been cured once his abscess was opened if we had had to do with a veritable encysted abscess, instead of a collection of diffuse purulent material. As usually it is impossible to say when a cerebral abscess is opened if one has to do with an encysted abscess or with an abscess situated in the cerebral mass, without limiting membrane, we should observe certain rules dictated by prudence. One is, in my opinion, that one ought never to make injections into the interior of the cerebral cavity, for in my case particularly an injection would not have failed to have produced what was done later on by the purulent collection itself—*i. e.*, to penetrate the ventricles and bring about sudden death.

Perhaps it might be possible to recognize the abscesses which have a limiting wall on examining the pus which escapes by the orifice of the drainage tube or the cannula placed in the brain. In my case, indeed, it was absolutely evident that the pus was mixed with sphacelated cerebral material, which made me fear from the very beginning a fatal issue in spite of the opening of the abscess.

From another point it is interesting to note the considerable cerebral hernias which are not revealed by any distinct trouble. Indeed one meets with a fair number of cases in which we have been able to resect the hernial portion without the patient feeling any effect afterwards. The book of Dr. Mignon contains a typical and very interesting example of this.

It is also useful to establish what ought to be the line of conduct of a surgeon in presence of cerebral hernias, which are often fairly voluminous. Should he try to reduce them, which is not easy; should he on the contrary help their elimination by ligaturing their base or resecting them with the knife or the thermo-cautery? Such are the interesting problems which must be resolved, for they are in the highest degree important to the aural surgeon who finds himself in face of cranial complications consecutive on suppurative otitis.

ADENO-SARCOMA OF THE NASAL SEPTUM.*

BY ALBERT RUFUS BAKER, M.D., CLEVELAND, OHIO.

Professor of Diseases of the Eye, Ear and Throat, in the Cleveland College of Physicians and Surgeons; Oculist and Aurist to the Cleveland General, St. Alexis and City Hospitals.

Miss E. G. D., age forty-nine years, referred for examination and treatment by Dr. Maynard, in January, 1896, with the history of a tumor of the cartilaginous septum of the nose. First observed one year previously. I found a somewhat flattened tumor about the size of a hazel nut covering nearly the entire surface of the cartilaginous septum. Bleeding frequently but not profusely; no pain; principal complaint that of obstructed nasal respiration. Also suffers from deafness and slight attacks of earache on the same side.

A portion of the tumor was removed with the cold snare and submitted to Dr. H. W. Rogers for microscopical examination. He pronounced it non-malignant adenomata.

On January 15, 1896, the patient entered the Cleveland General Hospital and I removed the tumor with a sharp curette and cauterized the base thoroughly with the electric cautery. Soon after the operation the patient developed a purulent otitis media which persisted rather obstinately but finally yielded to treatment. Patient comes from a tuberculous family. When about twenty years of age, suffered from a large abscess under the tongue, which opened spontaneously, and for thirty years there has been a constant discharge from a fistula, the sinus apparently leading into the sublingual gland. The pus is cream-colored, quite abundant, but no odor.

In February, 1898, the patient returned with a recurrence of the tumor: first noticed less than a month previously; growing rapidly and presenting microscopically much the same appearance as before. Not the same tendency to bleed. Considerably larger and extending back on the bony septum almost to the naso-pharynx. Another specimen was secured for microscopical examination and submitted to Dr. Rogers, who said the case was now one of typical adeno-sarcoma—a diagnosis confirmed by Dr. Ohlmacher and others who have examined the slides.

On February 28, 1898, a radical operation was undertaken under ether narcosis. The Rouge operation was made—a favorite one of mine

*Read before the Section of Laryngology of the American Medical Association, Columbus Meeting, 1899.

in the pre-cocaine days of rhinology, and one that I believe should be undertaken more frequently even now. The absence of deformity and the ease with which all parts of the nasal fossæ can be reached make it an ideal operation. I have never attempted it under cocaine anesthesia, but I believe it could be thus done, painlessly and satisfactorily. The operation, as you are well aware, simply consists in making an incision beneath the upper lip and turning the lip and nose up over the forehead, thus giving access to the nasal fossæ. During the early years of my practice I made the operation several times while under a general anesthetic, and the subsequent pain and discomfort was so slight that the patient was never aware but that the operation had been made through the anterior or posterior nares.

I recall a case of a medical gentleman, recently deceased, who sacrificed himself upon the altar of science annually by going before a class of medical students and permitting the professor of surgery to pull off one of the many nasal polypi from which he suffered. I made the Rouge operation upon him while under general anesthesia, without his knowledge, and thus by a radical operation spoiled one of the professor's most constant and spectacular clinics.

In the case of Miss E. G. D. nearly the entire septum was removed; the tumor presenting a flattened, elongated appearance, about the size of my two thumbs, and in no wise pedunculated, covering almost the entire cartilaginous as well as the bony septum, but at no point did the tumor extend forward to the junction of the skin with the mucous membrane or upon the floor or roof of the nasal fossæ.

The patient made a much more rapid recovery than from the previous operation, with no deformity. She was last seen on April 15, 1899. At that time—about fourteen months since the last operation—there was no recurrence.

I have reported this case because of the rarity and as a slight contribution to the mooted question as to whether a benign adenous ever becomes transformed into a malignant one. I might say that the entire tumor after both operations was submitted to several microscopists, all of whom concurred in pronouncing the first a benign and the last a malignant tumor, several of whom knew nothing of the history of the case. The specimens were used for demonstration in the pathological laboratory of the Cleveland College of Physicians and Surgeons, but I still have the original slide in my possession and intended to present them to the Section, but in my haste to catch the train I forgot them.

SARCOMA OF THE NASAL PASSAGES.*

BY H. V. WÜRDEMAN, M.D., MILWAUKEE.

Nearly nine years before a woman patient, aged forty-seven, in general good health, but at that time passing through the menopause, consulted the author for nasal bleeding and stoppage of the nose. A few months before a number of polypi had been forcibly removed "by twisting out with forceps" by another physician. The tumors had recurred and while the bleeding was not alarming, it occurred upon exertion. Examination showed one nasal passage totally stopped by polypoid growths and the other partially occluded. A large polypocystic growth containing about ten grammes of pus, the base of which was attached to the sphenoidal plate of the ethmoid, was removed from the left nasal passage by snaring. The next day three fibrocystic growths, about the size of a walnut, were removed from the same side by the cold snare, the attachments being between the middle and superior turbinal bodies. The snare was tightened very slowly, the operation taking fully a half hour. It was, however, followed by considerable bleeding, which was controlled by plugging. The plug was removed and replaced the next day, and the tendency towards bleeding was later controlled by galvano-cauterization. Two weeks afterwards mucous polypi were removed from the right side; one week later a large solid tumor and several small ones were removed from the left. Recurrence of the hard tumors took place three weeks later, being removed together with the superior turbinal bone; considerable hemorrhage occurring which was controlled by tampon and ergot. Galvano-cautery was afterwards applied to the origin of the growths.

Patient has been seen several times a year to date of writing, but since 1891 there has been no recurrence of the neoplasms of the nose. The condition of the nose now is that of slight atrophic catarrh, the patient being kept comfortable by alkaline washes and oil sprays which are used at home. The examination of the specimen removed from the nose was made some months after the original operations and the slides have been submitted for inspection to a number of pathologists since that time, the growth being pronounced by nearly all of them to be small round-celled sarcoma.

* Author's Abstract.—Read before the Section of Otology and Laryngology, American Medical Association, fiftieth annual meeting, Columbus, Ohio, June 6, 1899.

The author remarks upon the tendency for benign neoplasms, particularly those of the papillomatous variety, to be incited into pernicious activity and transformed into malignant growths by trauma, such as cauterizations or rough surgical procedures, for instance: forceps operations in removal of mucous polypi. We can seldom absolutely discriminate by the microscope between papilloma and carcinoma, and it is likewise true of some of the sarcomata, notably the round-celled sarcoma occurring in lymphoid structures.

In this case, from the clinical symptoms of bleeding and pain in the head, the history of a rough operation in the nose, the unusual bleeding following the removal of the growths by the cold wire snare, and from the microscopic appearance of the tumor there seems to be no doubt but what we may properly classify it under the form of lympho-sarcoma and say that the disease was originally lymphadenoma, which was lighted up into pernicious action by trauma and transformed into the malignant growth.

Aside from the pathologic interest of this case, the fact of a permanent recovery from nasal sarcoma is of considerable clinical import, showing that these cases may sometimes be cured if radical removal of the growths is done sufficiently early.

A REMARKABLE ACCIDENT.

BY J. W. BIRD, M.D., STEVENS POINT, WIS.

Mr. H., age twenty-four, while running across the yard in the dark, ran into a wire clothes line.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

The wire drew through his mouth and caught in his teeth, throwing him to the ground and tearing out nearly all of the left superior maxillary with eight teeth on it.

The dimensions of the bone are as follows: external surface, two and one-half inches: height, one and five-eighths inches, and depth, one inch.

The left half of the roof of the mouth, the floor and outer wall of the nasal fossa were removed with the bone.

The Schneiderian membrane and periosteum, lining the fossa, were not ruptured, so the nasal passage is normal.

The line of fracture was through the antrum of Highmore, and at the lower margin of the infra-orbital foramen.

The unusual feature of the case is: that there is no perceptible scar or deformity of the face.

This serves to illustrate how extensive injuries about the nose and throat might heal and leave no deformity.

SOME CONSEQUENCES OF SINGERS' NODES.

BY PROF. DR. A. ROSENBERG, BERLIN.

This name, derived from Stork, of the small, barely pin-head sized, white or at times reddish, more or less circumscribed nodes, which occur not rarely bilaterally on symmetrical points on or directly under the edge of the vocal cord, is not applicable in so far as these nodes may be observed in persons who do not sing or speak professionally, and no analogy exists for taking size alone as a basis for the classification of tumors. They are characterized, however, in their relation to other tumors of the larynx by their small size, with no increase of same even after an existence of many years, and until a thorough, systematic, histological examination of these small tumors permits of an exact classification, we must retain this provisional nomenclature, cognizant of its present inadequacy. The data as to the finer construction of these small tumors are as yet insufficient. It is certain, however, that a considerable proportion of these tumors have some relation, as Fränkel has been first to point out ten years ago, to a gland of the vocal cord described by him, which sends its duct to open in the region of the pars libera directly under the edge of the vocal cord. The existence of this gland has been proven by repeated histological examinations (Chiari, Alexander and others) and observation frequently shows an exit of secretion from the small tumor during phonation.

A short time ago I had occasion to observe clearly in a young man, two days after a drinking frolic, a nearly pin-head sized node of reddish color, located about the middle and under the edge of the right vocal cord. He had used his voice excessively, which had produced hoarseness. This node subsided considerably through resting the voice—in proof of the frequently expressed opinion, that excessive use of voice may cause these small tumors. They are called into existence by an obstruction of the mouth of the duct, which may result in a swelling of the gland or a dilation of the duct.

These nodes may persist indefinitely in a considerable proportion of cases; still in a great number, as above cited, restitution wholly or in part may occur. Individual conditions excepted, the former result will principally prevail, if the patient, especially in

the beginning, does not remain sufficiently quiet; this is oftener the case, as the disturbance of the voice need not be noticeable. This observation may be proven by the fact that at times singers can sing clear and well with these nodes. Non-subsistence of these tumors will occur if hyperplasia of the epithelium of the surface has taken place through friction of the tumor on the edge of the other vocal cord, for instance, or through other excitants, or if an increase of connective tissue has taken place.

I have observed in several lady singers a further alteration of the vocal cord arising from these nodes in consequence of insufficient or entire lack of rest of the organ. This alteration I can not look upon as extraordinary, for I have seen it too often, but must regard it as a type which I had observed at times in former years without being clear in my mind as to its nature. I believe I have been able to observe in a few recent cases the etiology of this alteration. In one case I could observe the increase in the size of the node after each use of the voice, its reduction in size after resting, enabling me to control by the laryngoscopic condition her obedience to my instructions as to resting. Pressing circumstances compelled the patient at one time to sing about a fortnight regularly, and with exertion, and I could see how the little circumscribed tumor gradually subsided, giving place to a more diffuse broadening of the vocal cord in the entire region of the *pars libèra*, which gave the edge of the vocal cord a shallow, convex form. The vocal cord retained its white color, but the edge appeared less sharp, rather somewhat thickened and rounder. The enlargement, originally confined to the mouth of Fränkel's gland, now occupied the entire non-cartilaginous portion of the vocal cord. After prolonged rest and local astringent medication the normal condition was restored. The covered, easily fatigued and badly sounding voice regained gradually its brilliancy, power and freshness.

In another case of a professional lady singer the same laryngoscopic picture could be observed. In this patient, who paid no heed to my pressing admonitions to rest her vocal organ, the broadening of the vocal cord increased within a few weeks to such an extent that the edge of the vocal cord had, by its own increase in volume, progressed even more toward the median line than in the previous case, and a relatively greater amount of impairment of the voice resulted. When the patient attempted to phonate, a closure of the glottis could be seen in its anterior part. The resistance which the healthy vocal cord met from the curved prominence of its fellow (in its *pars libèra*) prevented in the posterior portion a normal

glottis phonatoria, but caused it to gape with a triangular slit, and principally at the expense of the diseased side. When both vocal cords, as it also happens, are affected, the resulting slit is naturally in the form of a more or less perfect rectangular triangle.

We have seen that the first phase in the development of this alteration is the singer's nodule, which is itself caused, at least in a large proportion of cases, by the occlusion of the mouth of the previously mentioned gland. The persistence of the existing cause (lack of rest, viz., excessive use of voice) may cause an increasing dilatation of the gland duct through increased secretion, or, which is more likely, the gland itself may enlarge through retention of secretion, or a hyperplasia may be incited. Perhaps an occasionally inflammatory process may develop, which may progress into the adjoining structures and give rise to inflammatory neoplasm or hyperplasia. It is in this way that I connect these different manifestations.

This conception is not rendered less probable by the observation of a third case, which showed at the most prominent part of the convexity of both vocal cords a so-called singer's nodule. It would rather appear that this combination especially points to the relation above mentioned. The explanation in this case would be, firstly, a swelling of the gland, and, as a consequence, a dilatation of the vocal cord, producing a diffuse arching outward of the edge of the vocal cord, which through altered location of the mouth of the duct, has caused a nipple-shaped enlargement.

In consequence of the altered shape of one or both vocal cords, the thickening of their edge, their changed vibrating capacity and the inefficient closure of the glottis, the patient's voice sounds muffled and no longer has its former timbre: the patients complain of early fatigue (from phonetic waste of air) and of uncertainty in taking a note, which they usually cannot sustain.

This alteration of the form of the vocal cords has not yet, as far as I am aware, been described, and, as I believe I have been able to explain its causation, I thought it advisable to call this condition to the attention of my colleagues.

AN INTERESTING CASE OF FATAL DYSPNEA IN A CHILD.

BY SAMUEL E. ALLEN, M.D., CINCINNATI, OHIO.

Laryngologist and Aurist to the Cincinnati Hospital.

The following case is reported both on account of its uniqueness and the difficulty in making the diagnosis during life :

Carl B., age four years, a big, fat, healthy-looking country boy, living on a farm fifteen miles from the city, was admitted to the Cincinnati Hospital, May 17, 1899, for the relief of severe attacks of dyspnea, which had come on during the last month, and the day before were so severe that his physician thought he must asphyxiate. The child's breathing was difficult and noisy, more noisy than difficult at the time of examination, there being no sinking in of the clavicular spaces. Expiration seemed more difficult than inspiration. There was a peculiar, moist, noisy, rattling noise, evidently arising in larynx or trachea. Coughing was started on the slightest irritation. Otherwise the boy was the picture of health. The history obtained from the father was that the boy had taken cold three or four weeks previous and since then had had croupy attacks, coughing and difficulty of breathing, especially when excited or when awakening from sleep. Otherwise he was perfectly healthy, appetite good, no difficulty in swallowing, bowels regular, etc. When sound asleep or lying perfectly quiet there had been very little dyspnea. The voice had never been affected. Temperature, 99; pulse, 128. A laryngoscopic examination, which was very successful after a few attempts, showed the cords and upper portion of the larynx to be perfectly free, nor could anything be detected below the cords. Movements of the cords normal. Under chloroform the same noisy respiration. An esophageal bougie passed into the stomach without meeting any obstruction. An examination of the lungs was difficult on account of the noise in trachea. Respirations, 24 to 30. Patient was placed under the charge of a special nurse, and most carefully watched for nine days. During this time, while there were no dangerous attacks, the noisy breathing, cough and dyspnea remained about the same, being most marked when boy was excited and on awakening. As soon as the physician appeared he would begin to cry and cough and the breathing became labored and noisy. When sound asleep the patient seemed to breathe with almost perfect ease. The diagnosis of a

foreign body in the trachea became more and more the only plausible explanation of the trouble, although there was absolutely no history tending to confirm such an opinion.

On May 26, 1899, an incision into trachea was made under chloroform, with the expectation of encountering some sort of foreign body. The trachea contained considerable thick mucus, but both forceps and probe failed to bring to light any obstructing body. A probe could easily be passed upward through larynx and downward to bifurcation and into large tubes. A tracheotomy tube was inserted and the boy taken back to the ward. The attacks of coughing and dyspnea continued as before, possibly a little less pronounced. The tube was removed on the fifth day and the wound allowed to heal. The patient remained in the hospital until June 5th, when he was discharged and taken to his country home. His condition was about as it was on his entrance. A month later I was informed by his physician that the boy had had during the night an attack of dyspnea and had died in a few moments.

A post-mortem examination was made the next day, at which I found the following conditions:

The larynx, trachea and lungs were removed and examined. Lungs normal except at apex. On splitting the trachea a large amount of cheesy material was found, evidently sufficient to occlude the lumen and cause asphyxia. Close to the bifurcation one large ulceration the size of a dime and several small ones of pin-head size were disclosed. Encircling the trachea at this point was a mass of enlarged glands and included in the mass was some consolidated lung tissue from the apices. When pressure was applied to the mass on the dorsal side, large quantities of cheesy matter welled up into the trachea. This gland mass when cut was seen to be entirely broken down. The mass overlying the trachea was still firm. Microscopic examination of the firmer masses revealed typical tubercles.

Death was therefore caused by the breaking down of this localized tubercular mass and the discharge into the trachea of caseous material in amounts too great to be expelled.

Tubercular trouble was hardly thought of during life, as the parents were both healthy and the child was so perfectly well developed and nourished. After the post-mortem I was informed by a neighbor that a sister of the mother had died of tuberculosis.

SOCIETY PROCEEDINGS.

SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

(Continued.)

DISCUSSION—OPENING ADDRESSES.

Indications for Opening the Mastoid in Chronic Suppurative Otitis Media.

POLITZER (Vienna): It was a happy idea of the Organization Committee to have a discussion on such an important question. There is no question in otology which creates more actual interest than the opening of the middle ear. Experience has shown that the opening of the middle ear is of the most vital importance in preventing consequences hurtful to the organism and even of saving the life of the patient.

The indications were generally understood and in most of the well-marked cases surgeons were likely to be in perfect accord, therefore there could be little now to say in reference to the indications. The chief point in this discussion will be to decide whether it is justifiable without well-marked symptoms to operate as frequently as some operators maintained. Experience teaches that not rarely the clinical symptoms did not always correspond to the pathological changes found during the operation on the temporal bone. Sometimes only insignificant changes, such as a small quantity of granulation tissue in the attic or antrum, were found in cases where we have performed the operation on account of dangerous symptoms. On the other hand, we might find grave changes where before the operation we would not have expected them.

These circumstances render it more difficult to draw strict lines in regard to the indications, and there will always be cases in which some surgeons on account of the impossibility in predicting exactly the pathological changes in the temporal bone hold that it is not advisable to wait for the appearance of well-marked symptoms, and decide to operate at once, while other surgeons would advocate more conservative methods.

That many cases of chronic suppuration of the middle ear could be healed by vigorous antiseptic treatment, by removing the granu-

lations or cholesteatoma in the tympanic cavity and the attic, by partially removing the wall of the attic, has been shown by the daily experience of those surgeons who treated such cases by conservative methods. Although I am a strong advocate of the radical operation in suitable cases, I cannot agree with those surgeons who performed it often for the mere purpose of arresting the discharge, at least until strenuous efforts had been made to stop it by other means. In these cases it is not justifiable to have recourse to an operation, which, although not necessarily dangerous in the hands of a skilled operator, is still a serious one, especially when we consider (1) the many important structures in the vicinity which might be injured; (2) the possible permanent impairment of hearing in those who before the operation could hear fairly well; (3) the protracted healing process after the operation which very often renders the patient "hors de combat" for many months. It is my firm belief that these views will, in course of time, receive general assent, when further anatomical researches and more extended clinical observations have cleared up those points, about which at present our judgment is still in doubt.

WILLIAM MACEWEN (Edinburgh): When a pyogenic lesion exists in the middle ear or in its adnexa, which was either not accessible or which could not be effectually eradicated through the external ear, the mastoid antrum and cells ought to be opened. Some operators content themselves with opening the mastoid by sinking a narrow shaft into the antrum through which they can inject fluid, and others perform a typical operation irrespective of the pathological condition revealed. I first open the mastoid at the base of the supra-mental triangle. From that point the pathological lesions are followed anteriorly into the middle ear, especially exposing and carefully scrutinizing in all cases the attic of the antrum and tympanum, when, if found eroded, these plates are removed along with the morbid contents of the middle ear. We then pass backwards and downwards through the mastoid cells towards the sigmoid sinus, following the pyogenic erosions wherever they tend in that direction, and when necessary exposing the knee or the sigmoid sinus. After opening the mastoid antrum and cells, the further procedure has a purely pathological basis: if the disease revealed be extensive so must the operation. The ablation of the mastoid, while at once eradictory, a suppurative process chiefly located in the mastoid antrum and cells afforded at the same time ready access to the attic and inner wall of the tympanic cavity and to the auricular extremity of the Eustachian tube. Immediately after the operation one could initiate the forma-

tion of a vascular tissue, and thus create an efficient barrier against pyogenic extension to the otherwise most accessible and most vulnerable parts of the brain, the cerebellum and sigmoid sinus. In persistent otitis media purulenta the mastoid operation has at least three advantages over that of the treatment by way of the external auditory meatus. (1) Exposing to ocular inspection all the affected area and, by this, enabling the operator to follow and eradicate all the recesses in the bone made by pyogenic invasion. (2) Securing asepsis, and (3) Raising an efficient barrier against pyogenic extension between the most vulnerable parts of the brain and sinus. When it is recollected that in many instances the otitis media purulenta is obscure and overlooked and that symptoms of the purulent absorption might be of a typhoid as well as of a pulmonary type, one could easily understand that death might be attributed to pneumonia or to enteric fever. It could not be too often recalled that the virulence of the otorrhea could not be measured by the quantity of the secretion, its odor or the slowness of its initial symptoms, and that the pyogenic process might proceed insidiously until some slight exciting cause or accidental circumstance precipitated a dangerous or fatal crisis. Another question arose whether there were lesions in the middle ear which, though it might be mechanically possible to remove them through the external auditory meatus, could yet be removed with greater safety through the mastoid. This must be answered affirmatively while the middle ear and its adnexa were in a septic condition and when by applications through the external auditory meatus they could not be made aseptic prior to the performance of an operation entailing the exposure of a fresh surface to action of pyogenic organisms and their products. To operate through the external ear under such conditions was to court disaster. By opening the mastoid one could efficiently remove therefrom the suppuration and could eradicate its cause, after which an operation involving exposure of a fresh surface could be proceeded with in safety. In the presence of granulation masses one did not devise an operation merely for their removal, but for the eradication of the disease which had occasioned them. In removing them one had also to make provision that absorption would not take place through the wounded surface left thereby. In many, if not all, of these persistent pyogenic otorrheas, the osseous tissue was involved and it was very difficult by means of treatment through the external auditory meatus to eradicate the organisms that had housed themselves in the recesses of a minute particle of necrotic bone. In the interior of such harbors of refuge, situated in the mastoid, the pyogenic and

other organisms were safe from any antiseptic wave or blast introduced through the external ear. In recurrent cases of purulent otitis media one could not pronounce the patient safe even when the otorrhea ceased temporarily. Cholesteatoma and tubercular processes with secondary pyogenic involvement were conditions for which the mastoid required to be opened, as it is only in this way that these diseases can be efficiently removed. The problems connected with the question of operation upon recurrent attacks of purulent otorrhea are somewhat similar to those which arise in connection with appendicitis. Purulent otitis media and appendicitis have many analogies. They are both pyogenic, but while the latter is the result of a well-known bacillus whose course is definite, the former might be the result of one or other of a variety of organisms of greater or less virulency and producing different pathological effects.

With regard to the former, occurring in that perfect circulating chamber—the middle ear and its adnexa—and their relative pathological significance, valuable indications might be derived from the identification of the particular form or forms of organism which might be present in such cases. I presume after what I have written that it might be understood that the opening of the mastoid must always be undertaken as a preliminary step to operating upon those intracranial lesions originating in purulent otitis media, abscess of the brain, cerebellum and sigmoid sinus thrombosis. To operate upon the several complications and to leave uneradicated the paths by which pyogenic organisms entered was to render the patient's recovery doubtful and to expose him to fresh attacks. From personal experience I regard the operation of opening the mastoid as the safest and most efficient way of eradicating otherwise persistent purulent otitis. In conclusion, I would add that the more the pathology of purulent otitis media is studied, the more frequent the complete obliteration of the mastoid recesses is undertaken and the fewer will become the so-called incurable cases of ear disease. The operation of opening the mastoid substantially contributes to the well-being of human comfort and happiness and to materially lengthening life.

LUC (Paris): The surgical opening of the mastoid cavities is indicated in the case of chronic otorrhea under three distinct circumstances: (1) To give free escape to the pus in case of purulent retention. (2) To stop threatening or initial accidents of intracranial character in future of auricular origin. (3) To cure the otorrhea, after the symptoms had proved incurable by the various means of local treatment, including the arrest of all accessible granulations.

The operation, in the opinion of the author, was only urgent in the first two cases.

In all cases of chronic otorrhea the osseous openings must be extended from the antrum to the attic or from the attic to the antrum and be followed by curetting and disinfection of the entire cavities of the middle ear.

In the case of intracranial complications, the osseous opening must be immediately extended to the dura mater, but this membrane was only to be opened in a further operation, if, after as short an interval as possible of expectation, the intracranial symptoms persisted or increased.

KNAPP (New York): We do not only want to be informed that under certain conditions the mastoid should be opened, but also when, how and where, in particular how extensively it should be opened, the description of the mere technique or the operation however lying outside the question. When acute purulent otitis media was on the border-line of becoming chronic or had just become chronic, opening of the mastoid was indicated both as a curative and a prophylactic measure. The indication for opening the mastoid was strengthened if tuberculosis, diabetes, syphilis or some other constitutional disease were present, particularly in the case of children. The frequency of relapses in children is due to the structural conditions of the infantile mastoid. I mention a case which has come under my own observation to show that the suppuration may leave the tympanic cavity, attic and antrum but extend into and beyond the top of the mastoid. The pus cells in this case traveled through the condensed bones in passages so small that they could not be followed with the naked eye.

The indications for operation in advanced cases of destructive subacute chronic mastoiditis were absolute, and in the relapses of suppurative mastoiditis almost absolute. The prognosis in both cases was favorable. He had seen children recover who had a whole mastoid and a good deal of the adjacent temporal bone converted into gelatinous masses and the dura extensively covered with soft discolored granulations. The best treatment of cases which from the beginning showed a disposition to long duration was to perform the first opening of the mastoid and conduct the subsequent local and constitutional treatment with the utmost care and perseverance so as to prevent the affection becoming chronic. As particular requirements in such cases I would lay stress on: (1) A large, deep and angular incision of the drum-head and the adjacent part of the posterior wall of the ear canal as soon as there is bulging; (2) open-

ing the mastoid through the removal of all diseased tissue: (3) enlarging the antral canal by cautious scooping; (4) watching the course of recovery, using dry treatment rather than syringing. In chronic suppurative otitis media without symptoms of mastoid involvement that had resisted topical treatment and intratympanic operations, attico-antrectomy was indicated. In many cases it was difficult to determine when this should be done. During past years intratympanic operations had steadily lost ground. Many aural surgeons reported good results from the removal of the ossicles and cleansing the attic in cases of chronic otorrhea with or without cerebral symptoms. But unfortunately the good results in most of them had not proved permanent. He alluded to a patient who had long been treated by intratympanic procedures but received only temporary relief. These cases had determined him not to lose much time with intratympanic operations, although I would not go so far as an excellent otologist, who told me that he had abandoned them altogether.

If the outer wall of the mastoid was perforated and an abscess or a fistula present, it was indicated to evacuate the abscess and seek the perforation, and guided by it or the fistula, open the mastoid freely and remove all morbid material. That was better than to let the patient take the uncertain chances of a spontaneous recovery which was rarely complete and permanent. If the disease extended beyond the mastoid process the radical tympano-mastoid operation had to be followed by operations on the affected parts outside the ear. If in chronic purulent otitis media the anterior wall of the mastoid bulges—which means a suppurative involvement of the cells adjacent to the posterior wall of the ear canal—a free incision down to the bone was indicated. The wall should then be explored with a probe or, as the skin was swollen and painful, wait a few days to see whether the mastoid should be opened from the outer surface or from the interior. If the pus extended from the ear into the pharynx, forming a retro-pharyngeal abscess, open the mastoid and expose the tympanic cavity and attic clear to the tympanic orifice of the tube and free it as far as possible from pus and disintegrated tissue. The extension of the disease to the posterior cranial fossa was so important and so frequent that the removal of the posterior wall, in particular that part of it which formed the sulcus of the sigmoid sinus, had been recommended and practiced by some competent aurists in all cases. If the posterior wall showed no flaw on closest search and the suppuration was limited, the left wall need not be disturbed, but when the contents of the mastoid have undergone ex-

tensive molecular disintegration, I consider the exploratory partial exposure of the sigmoid sinus and dura mater correct practice. Similar indications resulted from the extension of the suppuration into the middle cranial fossa, an occurrence less frequent than its extension into the posterior fossa. Extension of the suppuration in the petrous bone might indicate opening of the mastoid as an initial step for removing carious and necrosed portions of the petrosa or to evacuate pus which passed from the middle ear through the petrous bone into the posterior cranial fossa producing an epidural abscess on the posterior surface of the petrous bone. Meningitis in the first stage might be recovered from by opening of the mastoid and posterior and anterior cranial fossa, boldly exposing the posterior surface of the petrous and liberating the pus. Necrosis of the different portions of the temporal bone indicated the opening of the mastoid in most cases. It was evident, in conclusion, that the opening of the mastoid in its recent development by the combined efforts of general and aural efforts took rank amongst the most important operations.

It was decided to hear Prof. Lucae's paper before the discussion was thrown open.

LUCAE (Berlin) summarized his paper by saying that he was of the opinion that the opening of the mastoid was a very important help, but he considered, that instead of saying: "I have operated on a good many patients," one should be prouder to state: "I have cured so many patients without having recourse to operation."

DISCUSSION—GENERAL.

GUYE (Amsterdam): The mastoid operation is a very great boon to the patient and to humanity in general, as Prof. MacEwen has so well said, but, nevertheless, as to finding the indication for mastoid operations only in discharge which did not give rise to dangerous symptoms, I can not agree. I coincide with Prof. Lucae when he states that one should be prouder of having cured cases of chronic suppuration without an operation. I consider that the important point in a case of chronic otorrhea is to keep the meatus as clean as possible, the using of carbolized glycerine and to exercise great care in keeping the Eustachian tube open. My practice with patients who could bear the expense is to get them to blow menthol into the nose. The mastoid operation ought to be reserved for really dangerous cases.

MACBRIDE (Edinburgh) joined views with Professors Politzer, Lucae and Guye in their conservative methods with regard to mastoid

operations. Prof. MacEwen had laid down that the simple discharge from the ear was an indication for a mastoid operation. The question came to be what could they promise to their patients from mastoid operation? In chronic cases they could promise the patient nothing. A certain proportion did not do well after the operation. The discharge remained and the patient was exactly where he was before. But he did not do quite enough operations in acute cases just beginning to become chronic.

GRADINIGO (Turin): Since performing a great number of middle ear operations by the retro-auricular method in cases of chronic suppurative otitis media, he had reached the conclusion that the indications of this intervention, such as generally admitted to-day, must be exaggerated. For the purpose of healing simple chronic pathological conditions of the tympanic cavity, the removal of the ossicles or even of the hammer only, and destruction through the external auditory canal of the posterior superior bony wall was, for the most part, sufficient. In such cases the retro-auricular method did not give better results and even exposed the patients to risks of various kinds. It required a long after-treatment, difficult of practice, especially on children, and the final result often compromised the success of the best performed operation. Careful comparison of the retro-auricular operation with the opening of the mastoid must be considered in cases of cholesteatoma antri and all cases where symptoms existed suspected of mastoideal pathological conditions or of intracranial complications. Regarding the technique he preferred the Zaufal-Strebe method.

NOYES (New York): While fully in accord with the advisability of operative treatment for cases where there was any bone disease, still he recommended the dry treatment. Powdered boracic acid was inserted in the ear by means of a quill for some time. There was a class of chronic cases in which the acute process might have already considerably subsided for which the treatment by dry powdered boracic acid was most effective, satisfactory, and not dangerous.

KÜMMELL (Breslau) said there were cases where the operation was forced.

THOMAS BARR (Glasgow) regretted that the subject of this discussion excluded the methods of operation and the result of operations, especially the latter, because one of the most important considerations with regard to this subject was the results of operative measures in chronic suppuration of the middle ear.

Probably the most interesting class of cases was that for which there was no immediate demand for operation—cases where there were no objective or subjective indications demanding speedy opera-

tion. We were indebted to Prof. MacEwen for uttering a warning about continuing the treatment by external meatus too long before adopting operation. We must not, however, be too much discouraged by these dangers. Still it was well that a surgeon of Prof. MacEwen's vast experience should utter these words of warning. The question of attic treatment had been rather disparagingly referred to by Dr. Knapp. The attic syringe was of great value, although many in use were too narrow. He had found that, after the attic treatment, no further operation was required.

WILLIAM MILLIGAN (Manchester): If, after twelve months' treatment, the suppuration didn't come to an end, mastoid operation should be adopted; he should like to associate himself very largely with the views of Prof. MacEwen.

T. MARK HOVELL (London): The mere fact that the discharge had existed for a long time was not sufficient reason for the mastoid operation. He cited one discharge that existed for forty-three years without any serious consequences.

C. R. HOLMES (Cincinnati): He had practiced along the lines laid down by Prof. MacEwen. Dr. MacBride had said that they couldn't promise results to mastoid cases. He certainly wished to put himself against that statement. He believed that in almost every case they could promise the patient a cure. They should save the patient the possibility of two operations when they knew one thoroughly performed would cure the patient.

E. B. DENCH (New York): Each case must be treated according to the local conditions present. When the mastoid operation was involved, a complete mastoid operation was imperative. If, during the operation, the surgeon found that infection of the lateral sinus had taken place, he must not hesitate to remove every source of infection. In one of the speaker's cases a second operation was necessary owing to jugular involvement.

E. CRESWALL BABER (Brighton): It was agreed that in chronic suppuration of the middle ear accompanied by severe pain an operation should take place. The most interesting question to my mind was whether the mastoid should be operated in the case of chronic discharge of the ear without any symptoms except the discharge. The logical surgical position was not to have a mastoid operation until one had exhausted all means for operating through the meatus, such as curetting. The real facts of the case ought to be put before the patient.

HOLINGER (Chicago): We are all more or less conservative in the treatment of chronic suppuration. There is one class of cases

undoubtedly where conservatism was absolutely contra-indicated, viz., the cases following the influenza and grip. Whenever, in a case of chronic suppuration of the middle ear or mastoid antrum, no matter how innocent it looked, acute otitis media after influenza occurred, we should not lose any time with any conservative measures. The only hope was to operate immediately.

P. R. W. DE SANTI (London): The duration of the discharge in cases under my observation was from two to fifteen years. Out of twenty-six cases twenty-four operations had been found to be perfectly successful, and in four cases the suggestions of Prof. MacEwen had been followed.

F. FAULDER WHITE (Coventry): It would be a deplorable thing if it went out to the profession that otologists in general were all for operations and not for any other treatment. They met the average practitioner and he told them that there was no cure for otorrhea. Writings had created that idea. A great many people wouldn't be operated upon and consequently they were not getting treated at all for otorrhea. I recommend antiseptic irrigation. I am not adverse to operations where the bone was diseased, but rather regretted hearing from Prof. MacEwen that all these cases had better be treated by operation, as it prevented a lot of very good general treatment.

M. D. LEDERMAN (New York) inquired what would be a suitable length of time for treatment.

URBAN PRITCHARD (London): If we operate, it must be done thoroughly and to do it thoroughly we must take great care not to leave a large hole covered up behind. These are the cases that made it difficult to say whether we should operate. Replying to Dr. Lederman's inquiry, he said that it was impossible to say how long a case should be continued in the ordinary treatment before determining an operation.

Other participants in the discussion were:—DRS. MOURE (Bordeaux), JANSEN (Berlin), EEMAN (Ghent), BRIEGER (Breslau), FARACI (Palermo), DI MENDOZA (Paris).

Prof. MacEwen briefly replied and pointed out that he had not said, as stated by Dr. MacBride, that in simple discharge operation should be resorted to. That statement had been made elsewhere and as he had not paid the slightest attention to it it had been repeated here. He wished it to be made known that it was not correct.

Prof. Luc and Prof. Knapp also briefly replied.

The Operation for the Removal of Adenoid Growths with the Head hanging over the Table, while the Patient is under the influence of Chloroform—P. RUDLOFF (Wiesbaden).

The author first drew attention to Rose's method of performing operations on the hanging head in cases in which there is danger of blood suction. Adopting this method, which excludes the dangers arising from the aspiration of blood and tissue, he described his method which he had employed during the last eleven years. His experience included over 700 cases. He advocated the free administration of chloroform and employed Boecker's and Hartmann's curette in performing the operation. In describing the method of operation he drew attention to the following points:

I. Adenoid growths occasionally have their origin in Rosenmüller's fossæ: in removing them it is important (*a*) to avoid injury to the pharyngeal orifice of the Eustachian tube; (*b*) to bear in mind that the tissue surrounding the carotid artery extends into the lateral wall of the fossa and that danger of injury to this artery is to be guarded against. How necessary this warning is, is proved by the case recorded by Schmiegelow.

II. Adenoid growths must be thoroughly removed (*a*) in order to avert as far as possible the danger of recurrence, (*b*) because a certain percentage of the cases, which occur, are tubercular.

III. If the tonsils are enlarged, it is advisable to remove them some time previously.

Dr. Rudloff illustrated his method by means of a specimen (sagittal section through the head) and exhibited the instruments he employed. He further showed casts, illustrating the varying dimensions of Rosenmüller's fossa and the relation existing between these fossæ and the orifice of the Eustachian tube, and referred to a specimen showing the relation between the carotid artery and the lateral wall of Rosenmüller's fossa, for exhibition in the museum of the Congress.

His statistics recorded a recurrence of three and a half per cent.

In concluding, he remarked that he did not confine himself to the method he described, but adapted himself to the individual peculiarities of the cases which came under his care.

LANTERN DEMONSTRATIONS.

The Anatomy of the Frontal Sinuses and Ethmoid Cells—A. HARTMANN (Berlin).

The Course and Connections of the Central Auditory Tract—ALDREN TURNER (London).

The Topography of the Facial Nerve in its Relation to Mastoid Operations—R. D. JOYCE (Dublin).

Special demonstrations were also given in the museum by Dr. L. Katz (Berlin), presenting an interesting series of microscopic and macroscopic preparations of the organ of hearing. The gems of this collection were the transparent preparations of the labyrinth. These have been photographed and adapted to stereoscopic demonstration.

PAPERS.

The Treatment of Chronic Suppuration of the Attic—E. MÉNIÈRE (Paris).

This paper was read by Dr. Lermoyez (Paris) owing to the author's absence.

Endocranial Complications of Otic Origin—E. J. MOURE (Bordeaux).

This paper appears in full in the October, 1899, issue of THE LARYNGOSCOPE (p. 205).

The Operative Treatment of Mastoid Inflammation—E. B. DENCH (New York).

Examination of the statistics of the larger hospitals in New York City devoted to the special treatment of diseases of the ear showed that ten years ago the mastoid operation was rarely performed. During the last few years it has been performed almost daily. Another important fact was while in former years the treatment of intracranial complications of suppurative middle-ear inflammation was relegated entirely to the general surgeon, at the present day these operations were performed by the otologist. Regarding the indications for opening the mastoid process in chronic suppurative otitis media, it is my opinion that the indications for the operation laid down by Schwartze many years ago were those followed at the present day. The only difference was that under improved surgical technique, by which perfect asepsis was secured, the surgeon did not hesitate to act on these indications immediately. For this reason the number of operations was relatively greater than in former years. If

asked to give the signs which seemed to indicate the necessity of operative treatment in this condition, I should name two: (1) Local tenderness over the region of the antrum, and (2) a sagging of the upper and posterior wall of the external auditory meatus close to the membrana tympani. When these signs exist operative interference is always indicated. Experience has shown that the temperature of the patient furnishes but little indication. Spontaneous pain might also be absent although the mastoid might have undergone extensive destruction. Many surgeons regard "tip tenderness" as an important diagnostic point. In my experience it has proven of but little value. Owing to the increased frequency with which the mastoid operation is performed it might be as well to consider any possible dangers which might arise in the operation itself. My own statistics show that out of 228 operations upon the mastoid process in no case could death be attributed to the operation. Where intracranial complications existed, operative treatment offered the only means of relief. In 13 cases in which thrombosis of the lateral sinus was present, death followed in but two cases. One patient died of acute nephritis, which was probably caused by ether narcosis. Where there was an epidural abscess my statistics showed that of 14 cases operated on all recovered.

Regarding the radical operation for the relief of a chronic purulent otitis media with involvement of the mastoid (the Stacke-Schwartz operation), 17 cases have been operated on. Of these 12 were cured and 5 improved. It can therefore be easily seen that the mastoid operation is not in itself a dangerous procedure if the rules of aseptic surgery are closely followed. No operation of this character should be performed without the strictest antiseptic precautions both as regarded the field of operation and the instruments, also the surgeon's hand. If proper care was taken, the exposure of the meninges, either in the middle or posterior cranial fossa, or exposure of the opening of the lateral sinus, did not increase in any degree the mortality of the operation. On the other hand, I have found that the more extensive and radical the operation, the better the result. The surgeon who operated most frequently and most radically was really more conservative than he who waited for very pronounced symptoms. Regarding the technique, all details of preparation of the operative field should here be undertaken with strict surgical cleanliness. The primary incision should lie close to the line of auricular attachment and should extend from just below the tip of the mastoid to just above the external auditory meatus, the soft parts being divided down to the bone. In this manner a very narrow anterior flap was formed.

The anterior flap was pushed forward by means of a periosteum elevator, exposing thoroughly the superior and posterior margins of the bony external auditory canal. All bleeding points were secured by means of artery clamps. The next step was to sever the attachment of the sterno-mastoid muscle. This was best done by means of blunt scissors curved on the flat. The tendonous attachment of the muscle should be divided until the finger can be passed beneath the tip of the mastoid into the digastric fossa. In every case the mastoid antrum should be first entered. This applied not only to those cases in which perforation of the cortex was present near the region of the antrum, but also where spontaneous perforation had taken place into the digastric fossa through the internal plate of the mastoid. For removing the mastoid cortex he preferred either the chisel or the gouge. The bone should first be removed as close to the posterior wall of the bony meatus as possible and not above the spinum supra-meatum. The opening in the bone should be gradually deepened until a probe can be passed through the mastoid antrum into the middle ear. The wound should then be explored by means of the probe to ascertain whether the bony walls are intact. After the mastoid antrum has once been entered the topography of the process is evident. The entire mastoid cortex should then be removed by means of the chisel or gouge and the tip removed by the bone forceps. Great care should be taken to thoroughly curette the aditus and antrum so as to permit free drainage of the middle ear through the posterior opening. Experience has taught me that the operator was inclined to do a less radical operation than was absolutely necessary. In my later cases I have found not infrequently that the bone seemed almost normal. Close inspection, however, revealed the fact that it was a little congested and slightly dark in color. With reference to any possible accidents that might occur during the operation, these are of trifling importance provided aseptic treatment was carried out. I never operate upon a case without expecting to expose or open the lateral sinus or to enter the cranial cavity. The exposure of the sinus in doubtful cases is imperative, and if its appearance is not perfectly normal, a free incision should be made into the vessel. No harm could possibly result from this procedure, and many a life which would otherwise be lost might be saved by what was apparently a radical and uncalled for procedure. The same applies to entering the middle cranial fossa. My own cases which have terminated fatally had been those in which I had not done a complete and radical operation.

KNAPP (New York): Do you attach the same importance to tenderness on pressure in acute cases as in chronic? Dr. Dench replied in the negative.

Panotitis: Cerebral Complications; Operation; Death; Post-Mortem—DELIE (Ypres).

A patient, aged forty, presented all the symptoms of chronic inveterate neuralgia of the right trigeminal. Deafness declared itself, and was found to be due to an exostosis of the right external auditory canal. An operation restored his hearing but produced no change in the right hemicrania. A few days later symptoms of acute mastoiditis declared themselves, accompanied by vertigo, and a hardly perceptible otorrhea. A Stacke's operation showed the only lesions to be purulent infiltration of the external wall of the apophysis and a small polypus in the attic. The patient died comatose a few days afterwards.

At the post-mortem examination the following lesions were discovered:

A purulent infiltration in the bony roof of the right middle ear.

Symptoms of acute meningitis limited to the interior surface of the bulb, spreading from the side of the affected ear to the internal third of the cerebellum, and compressing on the left side all the meninges which covered the left side of the cerebellum. There was pus in the fourth ventricle, and in the left lateral ventricle. The left ear was free of any pathological lesion, and the same could be said for all the other parts of the endocranium and its coverings, as well as for the bony skull.

The Petro-Squamosal Sinus—Anatomy and Pathological Importance—A. H. CHEATLE (London).

As little or nothing is written in even the best works on otology concerning this sinus, which has most important connections with the middle ear both from anatomical and pathological standpoints, I have thought the subject of sufficient interest to bring before the Congress. The following British authors have written on the subject: J. F. Knott, of Dublin (*Journal of Anatomy*, Vol. xvi, page 27), who quotes C. Krause, Luschka, Otto and Sir Charles Bell, Henry Morris (*Anatomy*, page 661), Professor MacEwen ("Pyogenic Diseases of the Brain and Spinal Cord," pages 2 and 8), and Quain (*Anatomy*).

COMPARATIVE ANATOMY.

In some lower animals, dog and calf for instance, this sinus runs across the roof of the middle ear making its exit by means of a large

foramen between the base of the zygoma and the bony meatal wall, and serves almost entirely for the exit of the intracranial blood, taking the place in fact of the sigmoid portion of the lateral sinus.

In the higher forms of monkeys, such as the chimpanzee, gorilla and ourang outang, the sinus closely resembles the human.

In the *Macacus* group the young often have the groove which runs along the petro-squamosal suture, and the anterior external opening well marked; while with the adult the opening is usually closed or rudimentary, leaving the groove which runs forward to the foramen spinosum. In other varieties, notably in Baboons, *Chrysothrix*, *Cebus*, *Midos*, *Hapule*, *Lemuridæ* and *Indri*, both the groove and the external opening are well marked, the latter piercing the bone between the large post-glenoid tubercle and the bony meatus. In these the sinus does not take the place of the sigmoid portion of the lateral sinus as it is also present and well marked.

HUMAN ANATOMY.

In early fetal life, before the formation of the internal jugular vein, the petro-squamosal sinus carries all the intracranial venous blood emerging in front to open into the primitive jugular (afterwards the internal jugular). It is not to be wondered then that this channel which serves such important duties in early fetal life should persist in some form or another in later life. The anterior opening usually closes, the sinus or its remains at its anterior extremity forming a connection with the middle meningeal vein. The sinus dwindles to a small size, while the opening into the lateral sinus often persists.

With regard to the persistence of the anterior opening in front of the meatus in adult life, I examined 2,585 skulls in the Royal College of Surgeons' Museum, and among this number I found in 23 rudimentary remains, 3 in the glenoid cavity, 3 in the zygomatic process itself, 6 in the base of the zygoma, and 11 just external to the Glaserean fissure, with sometimes a fine groove running outwards and occasionally bridged over by the junction of the post-glenoid tubercle with the bony meatus. I must here say that it is the rule rather than the exception for remains of the sinus to be present in some form or another all through life. In this statement I am supported by my friends, Mr. Arthur Keith and Mr. Cadman. Unfortunately it is impossible in the time allowed me to describe minutely the different varieties, but in the photographs to be shown directly some idea can be obtained, and some specimens of my own are now in the Museum.

In infancy and childhood the sinus as a rule had a well-marked opening into the lateral sinus behind by means of a valve-like opening and in front joining the middle meningeal vein, while in adult life, although it is often marked, careful search has sometimes to be made. The absence of markings on the bone in the neighborhood of the suture does not by any means show that the sinus is not present. In infancy and early childhood, in the region of the posterior extremity of the suture, numerous irregularities are often seen; it is at this spot that a bridge often forms over the posterior end of the sinus before it opens into the lateral sinus, a common condition in the adult bone. I will now show photographs of a few specimens in my collection.

A series of excellent photographs demonstrating various phases of the sinus were thrown on the screen.

On looking at the roof of the middle ear in a fresh specimen after the dura mater has been stripped off, a network of rather large veins can be plainly seen immediately beneath the bone: from this network several veins emerge through the suture to empty into the sinus.

In children in which the interval between the suture is wide these are sometimes numerous, especially posteriorly. In the adult a fairly constant one is present on a vertical level with the membrane: or more may be present at intervals. These emerging veins receive a fine covering representing the meninges.

Occasionally the openings of fairly large veins can be seen on the cerebral side of the sinus, especially at its anterior part.

PATHOLOGICAL IMPORTANCE.

It is therefore seen that there is a connection between the veins of the middle ear and those of the meninges and occasionally, at all events, with those of the temporo-sphenoidal lobe, and through the meningeal coverings the middle ear is in communication with those of the middle and posterior fossæ. Under these circumstances the importance of this sinus with its tributaries and connections, from a pathological point of view, is very evident and explains how infection may spread from the middle ear to meninges and brain without microscopical evidence of the connection. Such a state of things is not uncommon, as we all know, in infants and children, in whom, as I have said, the pathway we are considering is well marked and in whom the membrane may be intact. There is a specimen of mine in the Museum, obtained from the post-mortem room from an infant, aged one year, who died of suppurative lepto-meningitis, without a known cause, during an attack of pneumonia. The middle ear was

full of pus containing all sorts of pathologic cocci. I cut sections of the emerging vein but was unable to find cocci, but this by no means precludes this as having been the pathway. There was no thrombosis. This is by no means the first case of the sort I have seen. Occasionally it is seen in adults, but as a rule a perforation is present in the membrane. It is astonishing, in the face of this close connection of the middle ear with the meninges, that meningitis is not of more frequent occurrence. The explanation may be that the meninges, like the peritoneum, are able to deal with a certain amount of infection, and only when the dose is excessive that this resisting power is overcome. This pathway will also explain the presence of a cerebral abscess without microscopical connection with the diseased middle ear. That the sinus may be the pathway for septic thrombosis of the lateral sinus I have evidence in two cases.

A. H. Cleveland, of Philadelphia, in the *Archives of Otolaryngology*, Vol. xxiv, p. 136, 1895, relates the case of a boy, aged six years, who died of pyemia. At the post-mortem the petro-squamous sinus was found abnormally large and deep, being at one or two points almost entirely bridged over by bony processes. At its anterior extremity necrosis had taken place and pus had entered the sinus, causing a thrombus which extended backwards into the lateral sinus. Meningitis was present on the same side.

In St. George's Hospital Museum, and now in our own, is a specimen (No. 33a) of the dura mater, with the lateral and longitudinal sinuses, from a man aged twenty years who, after suffering with discharge from the right ear for three months, died with symptoms of meningitis. At the post-mortem examination suppurative meningitis was found over the right side with septic thrombosis of the lateral and longitudinal sinuses. A vein was found which made a direct communication between the tympanum and the lateral sinus and which would admit the passage of an eye probe.

It may be that we have here one of the pathways which will solve some of the unaccountable intracranial affections met with by the physician, such as the posterior basic meningitis of infants, cerebro-spinal meningitis, and perhaps some cases of tuberculous meningitis, especially when the lining membrane of the middle ear is like the following photograph (shown).

It is taken from a section of the lining membrane of the middle ear of an infant who died of tuberculous meningitis and general tuberculosis. Tubercle bacilli can also be seen in another section (to be seen in the museum).

I should like to draw attention to the condition of the middle ears of children who have died of general tuberculosis, including menin-

geal tuberculosis. There is thin, purulent matter in the cavity, often with an intact drum, irregular thickening of the lining membrane, which shows on section patches of well-marked infiltration, but no tubercle.

In conclusion, I wish to give my best thanks to the Council of the College of Surgeons, to Prof. Chas. Stewart, F.R.S., and Mr. Arthur Keith.

KNAPP (New York) said he was sure he was speaking the sense of the convention if he expressed his most hearty thanks to Dr. Cheatle, not only for the instructive demonstration and his important remarks on the petro-squamosal sinus, but also on his untiring efforts in bringing about such a unique otological museum, which they had all admired and studied with keen interest. His attention was first drawn to the significance of the petro-squamosal sinus by the case of Dr. Cleveland, of Philadelphia, which Dr. Cheatle quoted, and of which Dr. Cleveland had sent the speaker his manuscript with the remark that in text-books of aural surgery, and also in those of descriptive anatomy, nothing, or almost nothing, was to be found. He looked up the subject and found only a short but very good description (about 15 lines small type) in Quain. Now that authoritative attention had been directed to this sinus they should hear more about it. He felt sure that by its knowledge they should be able to understand many symptoms in vivo and at autopsies which thus far had been obscure.

A New Treatment for Chronic Catarrhal Inflammations of the Pharynx Connected with Diseases of the Ear—V. GRAZZI (Florence).

After referring to the frequency of chronic catarrhal pharyngitis and the inefficiency of all the methods hitherto proposed for its treatment, the author discusses the varieties and different degrees of the affection. He exhibited some microscopic preparations in order to show the normal structure of the pharynx and the alterations produced in it by chronic catarrh with hypertrophy of the adenoid tissue. He remarked that the structure of the pharynx itself suggested to him the method of treatment under consideration—a method which consists in the compression or crushing of the diseased tissues. Consequent on these maneuvers, repeated more or less frequently, the tissues become less inflamed, the granulations are re-absorbed, the function of the granular tissue is re-established as well as the circulation of the blood and lymphatics.

Prof. Grazzi carries out this treatment by means of small metal probes, bent at an angle more or less obtuse: the small probes end in a kind of fork into which are fixed small rollers. These are pressed up and down on the pharynx with more or less force, according to certain indications mentioned by Dr. Grazzi, and have been found very useful in certain cases where the disease had spread to the middle ear. The instruments were demonstrated at the Congress.

BRITISH MEDICAL ASSOCIATION.

SECTION OF LARYNGOLOGY AND OTOTOLOGY.

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Chairman's Address—Thirty Years' Progress in Rhinology.—

E. CRESSWELL BABER (Brighton).

In opening the work of this Section, it may not be out of place if I make a few remarks on the development of rhinology during the last thirty years.

It is just thirty years ago that Wilhelm Meyer, of Copenhagen, brought his eventful discovery of adenoid vegetations to this country, and read a paper on it before the Royal Medical and Chirurgical Society in London on November 23, 1869.¹ He had previously published an article in the *Hospitals Tidende* (1868), and subsequently wrote a long monograph on the subject in German in the *Archiv für Ohrenheilkunde* of 1873. Meyer, as I remember him in Copenhagen in 1874, was a charming personality, enthusiastic in his work, and full of energy with, as he himself described it, his heart in his general practice, his intellect in his special work. Meyer's paper, which forms a landmark in modern rhinology, appears to have attracted little immediate attention in this country, and it was not till some years after its publication that we find any original articles on the subject in England. Meyer, as he acknowledges, had been preceded in his discovery by the publication of scattered cases of adenoid vegetations by several observers, notably by Voltolini and by Loewenberg, but for an exhaustive study of the disease, both as regards diagnosis, prognosis and treatment, and for a recognition of its great importance and far-reaching effects, we are undoubtedly indebted to Wilhelm Meyer, who, as Mackenzie says, may be justly considered as the discoverer of these growths. Meyer recognized his first case by palpitation, and laid great stress on this mode of examination. His description of this disease was so full and complete that, except in pathology and treatment, no material advance has since been made. Numerous fresh instruments have, as you are aware, been devised for the operative treatment of adenoids, and removal under general anesthesia is now an every-day occurrence. The use of gen-

eral anesthesia was, I believe, first practiced in this country, one of the pioneers being Dr. Woakes, who, as mentioned in a paper on adenoid vegetations which I wrote in 1882,² had been using anesthetics for the purpose to a considerable extent before that date.

The way for Meyer's discovery had been paved by the invention by Czermak some ten years previously of the art of posterior rhinoscopy. Voltolini, who published his first work on rhinoscopy in 1861,³ began to work at this subject soon after Czermak, and was an ardent advocate for many years and in many writings of this method of examination. To him we are indebted for insisting on the importance of the palate hook, although one had been previously used by Czermak. Voltolini emphasized the fact that firm pressure with the hook was better borne than slight irritation, and therefore advocated the use of a large, strong hook drawn rapidly and firmly forwards. It was not, however, till more than twenty years afterwards when White, of Richmond (Virginia) and others introduced the self-retaining palate hook, employed after cocaineization, that the full benefit of this method of examination was apparent, and I think that even now the value of this instrument is insufficiently taught in our schools, as it can be so easily used on almost any patient, and gives an insight into the naso-pharyngeal cavity obtained by no other means. This instrument alone enables us to fully examine with the eye the posterior wall of the cavity; otherwise the view of the latter obtained in the mirror is usually too foreshortened to be of much value. Of Voltolini it has been truthfully said in a recent work⁴: "In the course of a long and laborious life he has presented science with many valuable observations; even where he errs he is more instructive than the eclectic from whom we only obtain a selection of opinions current at the time, without meeting with any original thought."

Anterior rhinoscopy, which is, of course, of much older date, cannot, singularly enough, be said to have been much cultivated in modern times until 1859, when Markusovsky invented the speculum bearing his name. Thudichum, of London, and Duplay, of Paris, both published accounts of their specula in 1868, instruments which for their purpose cannot be improved on at the present day. Fränkel's speculum dates from 1872. But real advance in anterior rhinoscopy was, I think, more due to the use of light reflected from a mirror with a central perforation than to any special form of speculum.

In 1882, the study of anterior rhinoscopy, and of nasal diseases generally, received great impetus from the well-known researches of Zuckerkandl on the normal and pathological anatomy of the nose

and its accessory sinuses. The next most noticeable event in rhinology was the ardent championship of reflex nasal neuroses by Hack, of Freiburg. In an able brochure published in 1881, and in numerous other papers, Hack contributed abundant material on the subject, and albeit his theories were not all sound, still a valuable substratum of truth, sifted by later observers, remains, for which we are indebted to this brilliant worker. Amongst other things, Hack's theories led to an extended use of the galvanic cautery, invented by Middeldorpf some years before, and much employed by Voltolini. Moderation in regard to its use has now happily set in, and it is not used so promiscuously as I am afraid it was at one time. It may be mentioned that before Hack both Voltolini and B. Fränkel had drawn attention to the relation existing between asthma and certain forms of nasal disease. Very shortly after this date, rhinology was destined to undergo what amounted practically to a revolution by the introduction of cocaine. In 1884 Jellinek published an article on its use in the throat and nose. In spite of the originally high price, the employment of cocaine rapidly spread in this department, not only on account of its anesthetic properties, enabling numberless operations to be painlessly performed, but also on account of its contracting power on the nasal mucous membrane. Its value in the latter respect in enabling a successful examination to be made may be fairly compared to that of atropine in examination of the eye.

While all these rapid developments were taking place with regard to the careful examination and treatment of the nasal cavities, the study of the various reflex neuroses connected with the nose and the use and action of cocaine, a new phase of rhinology was springing up. I refer to the study of sinus diseases. Diseases of the accessory sinuses when producing gross extranasal lesions had been known from time immemorial, and many fearful and wonderful operations had been devised for their removal. But the study of diseases of the sinuses, especially chronic empyema with only nasal symptoms (*Latent Empyema*, Lichtwitz) was practically a new departure and materially enlarged the scope of rhinology. The nasal cavities as we can inspect them were beginning to be regarded as only a small portion of the nasal tract, the gateway as it were to large and important cavities whose diseases merit careful study. Ziem. in his publications dating from 1880 onwards did pioneer work in latent empyema of the antrum, and was followed by a host of observers, who added largely to our knowledge. One of the most stimulating is Grünwald, and whilst his conclusions are doubtless some of them extreme, his work is highly suggestive and has greatly increased the

interest taken in the subject. All the different sinuses have been carefully investigated, including the frontal sinus, on some of the diseases of which we are about to hold a discussion.

Amongst other developments of modern rhinology may be mentioned the general recognition of the importance of nasal respiration and the improvement of the means of treating various forms of nasal obstruction. The pathology of the nose has continued to advance *pari passu* with that of other parts, and bacteriology has been laid under contribution in investigating the diseases of this organ. The physiology of the nose has also been reinvestigated.

In these few remarks I have merely attempted to point out some of the rapid strides which this specialty has made in the last thirty years, and in doing so have had to omit the names of very many successful workers, some of whom are honoring us with their presence at this meeting. This short sketch has, however, I hope, shown that the progress of modern rhinology is in nowise behind that of any of the other medical sciences, and I feel confident that by persevering and judicious application of the general knowledge of medicine and surgery to this particular branch, the efforts of its many devotees all over the world will enable it to make as rapid progress in the future as has been accomplished in the past. If I have confined my remarks to rhinology it is not that I consider it more important than laryngology and otology, but that a review of all three would have been impossible without encroaching unduly on your time.

Before concluding I should like to express the pleasure that I feel at seeing so many of our foreign colleagues present, and to offer them a cordial welcome in the name of the Section, and an invitation to take part in its proceedings.

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DISCUSSION—OPENING ADDRESS.

The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus.

CHARTERS SYMONDS (London) divided the cases into three groups:

1. Those in which there is purulent discharge from the nose, with, as a rule, formation of polypi.
2. Those in which there is distension of the sinus without nasal discharge.
3. Those in which there is distension of sinus, together with nasal discharge of pus.

Attention was chiefly given to the diagnosis of the first class of cases, as the class most frequently coming before the rhinologist. He laid stress upon the fact that, whenever pus was seen amongst or around polypi, suppuration of one or more of the sinuses was indicated. He considered the pus to be the cause of the polypi, and to explain the frequent recurrence of polypi when the pus itself had not been traced to its origin.

Where the polypi were numerous, it was impossible to say from which sinus the pus was coming, but he held that where they were very numerous, and there was much pus, with a foul odor, the maxillary antrum was certainly involved, with or without the frontal sinus. In the pure frontal cases the polypi were less numerous, the granulations fewer, and the pus as a rule inodorous; in these cases also there was no pain. After the removal of the polypi, he deemed the routine passage of a probe and cannula into the frontal sinus necessary. Passing on to the question of treatment, he divided it into intra and extranasal. After inserting the cannula and irrigating the cavity with boric acid or weak formalin, he suggested filling the cavity with an emulsion of iodoform and glycerine, while the patient lay on a table or couch with the head hanging over the end. In this position, half to one drachm could be introduced, the amount depending upon the size of the cavity.

In one instance, in which over half an ounce of thick pus had been removed, this plan was attended with complete success, and he recommended it as worthy of trial.

In two other instances it had failed, and in one of these the sinus was found to be filled with polypi, the other had not yet been operated upon. He strongly deprecated all attempts to enlarge the opening into the sinus from the nose.

In considering the extranasal treatment, he referred to those patients who declined such an operation, and asked what risk they ran.

He himself was disposed to think that, so long as the drainage was free and pain absent, the risk was very slight, and that we are therefore not compelled to insist upon operation. He mentioned cases that he had watched for eight to ten years.

For opening the sinus, the incision through the eyebrow was, he thought, generally adopted. The bone, he thought, was best removed by means of a gouge. Having opened the cavity and found pus, the question was what more should be done. We might, he said, simply clean the cavity, remove the polypi, ascertain that the opening was free into the nose, and then close the wound; or, again, enlarge the channel into the nose, or place a drainage tube from the sinus into the nose; or, again, remove the greater part of the anterior wall and stuff the cavity; or, lastly, place a metal drain through the incision, so that the patient could irrigate the cavity daily.

Examples of all these methods of treatment were given, attended in some with success, in some with failure. On the whole, he was disposed to advocate free enlargement of the channel into the nose, with closure of the incision, in the severe cases with polypi. In the slighter cases, where no polypi were found, he thought it sufficient to clear the cavity and insert iodoform. After operation he advised intranasal irrigation for a week, or, where this was impossible, through a small opening maintained in the wound by a metal plug.

E. J. MOURE (Bordeaux) considered the diagnosis of frontal sinus empyema sometimes fairly easy; at other times it offers some difficulty. Although habitually associated with empyema of the antrum, it may occur alone, as he had several times observed.

Probable signs, he said, were unilateral discharge of pus, seen on rhinoscopic examination after the antrum has been thoroughly cleaned by irrigation; growths in the upper part of the infundibulum, in the direction of the nasofrontal canal, with dilatation of this canal, giving free access to the sinus; supraorbital pains, spontaneous or on pressure.

As certain signs he mentioned temporary or permanent swelling over the frontal sinus, or the presence of a fistula in that region; the flowing away of pus after irrigation, when that is possible in the frontal sinus; darkness on transillumination as compared with the opposite side. Absence of the sinus, fortunately rare, also gives rise to this sign.

The differential diagnosis between frontal empyema and that of the anterior ethmoidal cells may be difficult, but injection and transillumination will generally suffice to solve the difficulty; and it is worth remembering that ethmoidal growths are generally situated farther back than those coming from the frontal sinus.

The treatment, he said, varies somewhat, according as one has to deal with the simple mucous form or with cases complicated with growths or fistulæ. In all cases it is necessary to ascertain the condition of the antrum, and if found diseased it must be treated before the frontal sinus. The treatment of the mucous form is purely medical, and will consist in inhalations; oil sprays, antiseptic or caustic; the air douche, simple or medicated, administered with Politzer's bag; irrigation through the naso-frontal canal, where this is possible, taking care to avoid the making of a false passage. The treatment of the suppurative forms varies according to the severity of the case.

In the milder forms the infundibulum and naso-frontal canal may be cleared of growths with the curette, and direct irrigation may be practiced when the conditions admit of it.

Diffenbach and Schaeffer's method of opening the sinus from the interior of the nose he considered dangerous. Finally, when more radical measures are required, one must have recourse to external operation by the methods of Kuhnt or Jansen, or, better still, Ogston-Luc. If the sinus be thoroughly curetted, and care be taken to avoid peripheral infection, the last-named operation he regarded as an almost ideal procedure for the radical cure of frontal empyema. If the sinus be exposed and rendered aseptic, and free communication be established with the nose, no other drainage tube is necessary, and washing-out should as far as possible be avoided, as it is liable to re-infect the curetted cavity. This operation is suitable also for cases in which there is bone disease with external fistula, or even intracranial fistula.

Of late years this method has yielded excellent results in his experience. None of his cases have relapsed, and the scar is so concealed by the eyebrow as to be unnoticed.

Method of Operating for Chronic Fronto-Ethmoidal Suppuration —RÖPKE (Solingen).

The author said that many of his patients are employed in steel and iron factories as grinders. The mortality amongst these at Solingen is very high: 80 per cent die at an early age from diseases of the organs of respiration.

Last year he and a colleague were directed by the government to examine 1,250 grinders, being 30 per cent of all the grinders working in Solingen and the neighborhood. They found only 12 per cent in good health; the others were almost all affected by diseases of the throat, nose or lungs. The result of this examination was published in a *Zeitschrift für Hygiene*. He mentioned these facts in order to show that he saw many cases of diseases of the antrum of Highmore, of the ethmoidal cells, and of the frontal sinus.

In most cases of chronic frontal empyema he believed the ethmoid to be also affected; and most authors have had regard to the ethmoid cells in their published methods of operation. During the last two years he had operated for chronic fronto-ethmoidal suppuration in the following manner: Exactly following the well-known method of Kuhnt, he makes the subperiosteal resection of the whole anterior wall of the frontal sinus, and scrapes out the diseased mucous membrane. The horizontal incision is two-thirds of the length of the supraorbital ridge, the vertical incision joins it at right angles; and the whole flap, including periosteum, having been reflected, the anterior wall of the sinus is chiselled away.

Then the meatus-fronto-nasalis is enlarged by breaking away a part of the inferior wall of the sinus, as far as it is necessary, to overlook the ethmoidal cells. By scraping out the diseased mucous membrane of the ethmoid he obtains a large communication between the frontal sinus and the nose.

The large cavity is stuffed with a strip of iodoform gauze, and the flaps are stitched, except at a spot for placing the strip through the skin wound on the inferior supraorbital ridge. If there is suppuration of both sinuses, the horizontal incision is made from one to the other side of the supraorbital ridge in the manner described: the vertical incision joins the horizontal at right angles in the middle. In these cases the anterior wall of both sinuses, the septum and the nasal process of the frontal bone, are chiselled away. Only through one side is a strip of gauze introduced; the other wound is closed.

Three days after the operation the strip is taken away and is not renewed, because the secretion of the cavity can flow off through the nose.

He had operated on twenty-five patients in this manner, thirteen of whom were affected on one side, twelve on both sides. All were cured of their affliction. The cases healed in from ten days to six weeks. Two patients, having had abnormally large cavities, were considerably disfigured; the other ones were not disfigured by the scars. Photographs of the results were shown.

He concluded by remarking that of course he did not operate till he had exhausted conservative methods. He believed that most chronic cases could only be cured by radical procedures.

(A more complete account of the author's method of operating upon the frontal sinus may be read in the *Archiv. f. Laryngologie*, viii Band, Heft II, and also in the report of the seventieth meeting of the *Deutsche Naturforscher und Aerzte-Gesellschaft*.)

On a Case of Chronic Empyema of the Frontal Sinus; Extension of the Infection to the opposite Side in spite of Three Successive Operations by the Ogston-Luc Method—Finally, Development of Diffuse Septic Osteitis of the Frontal Bone, and Death in Consequence of an Intracranial Infection in the Region of the Cortical Motor Centers of the Limbs—Luc (Paris).

The patient, a strong young man of twenty, with a good history, began to have purulent discharge from the nose at the end of 1893.

In February, 1897, Dr. Lermoyez performed the Ogston-Luc operation upon him for chronic fronto-maxillary suppuration. The antrum was opened through the alveolus; a frontal fistula remained.

In July, 1897, Dr. Lermoyez opened and scraped the antrum and repeated the Ogston-Luc operation. The frontal wound finally healed, but crusts and creamy pus were still visible in the middle meatus.

In August, 1898, he came to the author, who found that whilst the left antrum was cured, the left frontal sinus was still suppurating, and the disease had extended to the right antrum and frontal sinus.

On November 6, 1898, the patient consented to operation. The antrum was found but slightly diseased, probably acting as a reservoir. Both frontal sinuses were freely exposed by a vertical and horizontal incision, and a central opening of about two inches diameter was made in the bone. The right sinus was full of creamy pus and granulations; the left was narrowed by a kind of hyperostosis, and full of fibrous tissue, which contained few fungous elements and no pus, the naso-frontal duct being occluded on that side. Both frontal sinuses and such of the ethmoidal cells as were accessible were curetted, and the left naso-frontal duct was opened up. No drain was used. The wound was closed and a compress bandage applied. The external wounds healed perfectly, but pus and crusts continued to form in the left nasal fossa, and there was also a little pus in the right side.

December 26: Two days after an unsuccessful attempt to wash out the frontal sinus by means of a long curved probe introduced through the nostril, an abscess formed over the left eye. This was opened and drained. The wound healed, but the parts continued boggy, and pressure on the forehead caused pus to flow from the nose. A compressing bandage was therefore applied but the subcutaneous suppuration extended upwards, and on January 18th a fourth operation was undertaken in order to stop the infective process.

The whole of the frontal bone was exposed by incisions; its surface was rugous and covered with unhealthy granulations. The remains of the anterior walls of the sinuses were removed, and all diseased areas thoroughly curetted and purified with chloride of zinc. The upper part of the wound was sutured and the cavity packed with gauze. On January 24th, about a week after this operation, a subperiosteal abscess developed at some little distance from, and quite independently of, the frontal wound. This was at once opened and curetted.

On February 8th a second subperiosteal abscess formed. It was at once treated.

On February 17th a third subperiosteal abscess was detected, higher up in the hairy region of the scalp.

On March 8th the first subperiosteal abscess was healed, the second healing and the third discharging. All the lower part of the great wound was suppurating freely, the bone was still denuded, and the patient's general condition was beginning to decline. About this time the patient began to show signs of greatly increased nervous excitability, and a week or so later he complained of rigidity of the nape of the neck.

On March 12th there was distinct loss of power in the left leg, with a tendency to jerking and tremor. The knee-jerk was exaggerated. The temperature rose to 102° to 103° . The paresis increased and affected the lumbar muscles. It was concluded that the infection had reached the internal surface of the bone, and that pus was forming either on the external or internal surface of the dura, close to the cortical motor center for the limbs. To deal with this condition a fifth operation was undertaken on March 13th.

The whole of the frontal and right parietal bones were exposed, and part of the left parietal bone. The surface of the bones looked rough and uneven, as if it had been corroded by an acid. After curetting and disinfecting the diseased surfaces, the skull was opened, a rectangular piece of bone (8 cm. by 4 cm.) being removed over the suspected areas. Two purulent deposits were found on the dura, one over the upper end of the right ascending frontal and parietal convolutions, the other on the left side behind the motor region. The pus was removed and the dura mater curetted and touched with chloride of zinc. The dura mater was not opened, as the lesions found were considered sufficient to account for the symptoms. All the diseased surfaces were washed with sublimate, touched with strong chloride of zinc, and dusted with iodoform. Temperature, 104° . The patient's mental condition was one of considerable ex-

citement. He lay in a sort of lucid delirium, expressing his thoughts and feelings in improvised songs. He died two days after the operation, with a temperature of 106°. No post-mortem obtainable.

In reviewing the case, the author thought it was a mistake not to have laid open at once the second subcutaneous abscess (which appeared under the skin of the forehead), but to have contented himself with the application of a compressing bandage to favor the drainage which was taking place into the nose. The infection extended, and he was obliged after all to operate. The patient, however, was very averse to further interference, having already endured three severe operations. From this time the frontal bone became affected with a diffuse septic osteitis, as was shown by the series of three sub-periosteal abscesses, which were quite independent of the great primary frontal abscess. The fourth abscess developing on the inner surface of the bone caused the crural monoplegia, etc.

The continued progress of the nervous symptoms proved that in the last operation the operator did not go deep enough, as there was evidently a purulent deposit either on the pia mater or in the motor centers themselves. He had previously determined to open the dura at a subsequent operation if the nervous symptoms did not improve in twenty-four hours; but the rapid progress of the case made this impossible. He considered that he and his colleagues were fully justified in postponing the opening of the dura mater till it became evident that it was really necessary. Unfortunately it was then too late.

A Fatal Case of Chronic Empyema of the Frontal Sinus—HERBERT TILLEY (London).

A young woman of twenty-two suffered from almost complete nasal obstruction due to polypi, associated with a profuse purulent discharge from the anterior and posterior nares. As the antra were found on puncture to be almost free from pus, it was concluded that the frontal sinuses and ethmoidal cells were diseased. There was no headache.

The right sinus was opened through an incision under the inner half of the right eyebrow, and as the septum between the sinuses was found to be perforated, it was possible to curette both sinuses through the one opening. Both were full of pus and polypoid granulations.

The posterior wall of the right sinus appeared to consist of a healthy and a diseased part, separated by a line of demarcation. As the right naso-frontal duct was very narrow it was enlarged, but Dr.

Tilley wished he had enlarged it even more freely. A tube was introduced, and the external wound closed; the sinus was washed out three times a day with a dilute antiseptic.

Ten days after this operation suppuration occurred and the wound broke down, so the right sinus was re-opened, the passage into the nose was much enlarged, and the radical operation was at the same time performed on the left sinus. Tubes were inserted, the wounds were closed, and the syringing with antiseptics three or four times a day was carried out as before. About a week after this second operation a subperiosteal abscess formed over the lower median part of the forehead. It was opened at once. Four days later a similar abscess appeared over the left parietal eminence, and when it was opened bare bone was felt.

A succession of these abscesses continued to form at different points of the frontal and parietal bones, till at length the scalp covering them was undermined in every direction, and the outer table of the skull became necrotic in large patches, some of which separated and came away.

As a last resort a transverse incision was made completely across the scalp from ear to ear beyond the edematous soft parts, but it was found impossible to check the septic phlebitis of the diploic veins, and after nine months' illness, curiously free from pain (with the exception of about ten days' severe neuralgia), the patient died from pneumonic symptoms associated with those of chronic sepsis.

Unilateral optic neuritis was noted latterly. Pus from the scalp contained virulent streptococci.

Post-mortem.—Extensive necrosis of the vault; inner table of frontal bone healthy.

Dura mater adherent to vault, which it practically held together, but membrane otherwise normal. Longitudinal sinus healthy. Sigmoid grooves full of pus. Numerous multiple abscesses scattered through the cerebrum. Cerebellum and medulla healthy.

Petrous bone necrosed; subdural abscess below apex of temporo-sphenoidal lobe on both sides. Pus round cavernous sinus, and abscess of hypophysis.

A large abscess round left Eustachian tube and carotid artery extending down into a large postero-lateral pharyngeal abscess.

Evidently the pus got underneath the dura when the process reached the petro-squamosal fissure, and thus the tegmen tympani and sigmoid grooves became affected, and necrosis of the pars petrosa followed. Left mastoid antrum and sigmoid groove communicated by a large hiatus. There was septic pneumonia and pulmonary abscess.

Dr. Tilley recorded the case as showing the risks which might occur in opening the frontal sinus. He referred to Dr. Luc's case, and also to another which he had lately seen under the care of a well-known surgeon, as showing that such cases might occur in the most skillful and experienced hands. Possibly too vigorous curetting might open some of the diploic spaces, which afterwards became septic. In the presence of a septic osteo-myelitis only the most radical procedures offered any chance of success.

CORRESPONDENCE.

Editor THE LARYNGOSCOPE:

In my paper, "The Offending Middle Turbinal," which appeared in the September issue of *THE LARYNGOSCOPE*, I carelessly failed to give proper credit to Dr. Wm. L. Ballenger, of Chicago, when I alluded to "thickening of the membrane lining the air cells, as a result of chronic catarrhal bronchitis, which makes more difficult the osmotic purification and oxygenation of the blood." To Dr. Ballenger, I believe, is due the credit of having first noted and emphasized this idea. His paper appeared in *The Alkaloidal Clinic* for April, 1897.

EDWIN PYNCHON, M.D.

September 27, 1899.

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

It is our purpose to furnish in this Department a complete and reliable review of the world's current literature of Rhinology, Laryngology and Otology.

Authors noting an omission of their papers will confer a favor by informing the Editor.

I. NOSE.

Bleeding from the Lachrymal Duct—CHIARI—*Wiener Klin. Wochenschr.*, No. 28, 1899.

The author says that he has seen two cases where the nostril had been plugged with Belloc's canula on account of epistaxis, where hemorrhage occurred through the lachrymal duct. The intra-nasal blood pressure being high, and the blood being unable to escape either in the front or back, it had finally forced its way out through the duct. In neither of the cases did the hemorrhage prove important.

VITTUM.

A Tooth in the Nasal Cavity—HOELL TYLER—*South. Cal. Pract.*, Vol. xiv, No. 6, June, 1899.

The patient, a woman of thirty years, sought treatment for nasal catarrh. She had chronic rhinitis with a stinking discharge from the right nostril, chronic pharyngitis and was anemic. On cleansing the nasal cavity the author discovered what he mistook for a foreign body, about one inch from the anterior nasal orifice, and was surprised to find that he could make no impression upon it with forceps or strong steel hooks. Both ends being imbedded, he determined to cut it in two by means of the dental drill and extract the fragments. The jarring of the drill loosened it somewhat and it was extracted with the steel hook.

It grew from the nasal septum, in which it was imbedded to the depth of three-sixteenths of an inch with the root turned downward. The root did not penetrate the roof of the mouth, and it was not connected with the alveolar border nor with any cyst. It resembles a canine tooth. The wound in the nose healed readily, and the patient recovered from the rhinitis and pharyngitis under ordinary treatment.

EATON.

A Case of Ivory Exostosis of the Left Nostril and Orbit—CHIARI—*Wiener Klin. Wochenschr.*, No. 28, 1899.

At a meeting of the Vienna Laryngological Society, held June 8, the author reported a case of this somewhat rare affection. The patient, an eighteen-year-old girl, was in poor physical condition.

About two years ago she noticed that the left nostril would occasionally become occluded. This has gradually increased until for the past three weeks she has been unable to breathe through it.

For two months she has noticed that the left half of the nose was becoming more prominent, and for a week past pressure on the internal angle of the orbit has been painful.

In the left nostril, in the vicinity of the middle turbinal, was seen a smooth tumor covered with thin mucous membrane and about the size of a cherry. It sprang from the outer wall, and, pushing the septum over to the right, completely occluded the nostril. Between the tumor and the septum was a small whitish body, about the size of a pea, which evidently belonged to the middle turbinal body. The probe showed the tumor to be hard and smooth. All attempts to penetrate it were fruitless. On the inner wall of the left orbit was found a similar tumor about the size of a cherry also. This was pushing the bulbus oculi to the left. Inasmuch as these ivory-like tumors generally spring from the base of the skull, and because the patient would not consent to an extensive operation, it was determined to attempt the removal of the nasal portion of the growth only.

After several futile attempts, and with a good deal of difficulty, a piece about half the size of a cherry was finally sawed off. During the next few days fever came on, and an edema of the left orbit which finally extended to the right. Fluctuation appeared above the lachrymal sac. An incision gave vent to considerable pus. The edema gradually disappeared. The patient is still under observation. The orbital tumor is increasing and the nasal portion has again nearly occluded the nostril. This case seems to demonstrate the malignancy of the ivory exostoses.

VITTUM.

Hay Fever—J. C. CONNELL—*Kingston Medical Quarterly*, Vol. iii, No. 4.

The writer finds three distinct factors present in his cases, viz.: a predisposing neurotic condition, diminished vaso-motor control with nasal hyperemia; and an exciting agent which varies with the individual and locality. The first named is treated with strychnia or valerianate of zinc. Any nasal focus of irritation is removed. The acute attack is treated internally with gr. viii of ammonol bis die, and locally with McKesson Robbins' stearate of zinc with aristol as a dusting powder in the nose.

GIBB WISHART.

Hay Fever—CAROLUS M. COBE, Lynn, Mass.

A résumé of the theory and therapy of hay fever investigations up to date.

Advances the fact that very few ruralists have hay fever as indicative that the general cause of the disease is from some element or elements of city life. This can be neither dust, nor pollen, but likely the nervous wear and tear accompanying urban life. Bouchard found the toxicity of the urine in the city greatly in excess of that

in the country after a hard day's work. Thinks the breathing of excess of pure air, and the possibility that muscular exertion does not produce as much toxic material as brain work may account for the freedom of laboring men from hay fever. Coal gas and dry, heated homes influence some. The nervous system is the excitant. Denies that there can be no hay fever without intra-nasal disease. Of 42 cases treated, 22 had nasal disease as a prominent factor, 10 as a contributing cause, and in 10 there was no nasal disease at all. Dismisses the theory that the disease is caused by sepsis, as he has never seen a case the result of ethmoiditis or purulent rhinitis. Has treated cases where ethmoiditis accompanied hypertrophy, and reduction of the latter effected a cure while the ethmoiditis persisted. Naso-pharyngeal disease does not produce hay fever.

Believes hay fever to belong to the class of diseases of which spinal irritation is an example, where there is an unstable condition of the nervous system and any function of the body may be exaggerated. Notes a special sympathy between the posterior third of the nose and the bronchial mucous membrane, and in asthma, dependent on a nasal lesion, has invariably found that the sensitive region was the posterior third.

Another proof of this is in the location of the lesion in cases that change from typical hay fever to perennial asthma. This change never occurs if there is hypertrophy of the anterior ends of the lower turbinate, but is seen when the neurotic is accentuated. An analysis of many cases convinces that when a nasal lesion produces asthma it is located further back than the lesion of simple hay fever. With Bosworth, doubts the influence of pollen on the bronchial mucous membrane as a cause of asthma.

Of 42 cases treated, has cured 30, relieved 10 and 2 unbenefited. Believes 95 per cent can be relieved, but the nervous element makes a prognosis so uncertain that we should not promise more than relief. Treatment should be constitutional, local and palliative for the attack. Exercise and frugality in living, nerve tonics, specially zinc phosphid, quinine and arsenic. Shower baths and friction. Hyoscyamus and suprarenal extract are good to control vaso-motor dilatation. Too much intra-nasal surgery. Only conditions to consider in the nose are hypertrophy of the anterior ends of the turbinates, polypi, and possibly the thickened condition of the tissues covering the convex side of the septum. Other conditions are accidental and do not produce hay fever.

Believes the treatment of the old observers was not altogether unreliable. Has nearly always succeeded in stopping an attack that was established, by the method of Sir Andrew Clark — **R** Hydrarg Bichlorid, gr. i, quinine muriate, gr. xxx, glycer. acid carbolic B. P. ounce i. This usually causes an abatement of symptoms in 24 hours. Should this not benefit in several days applies a 15 per cent solution of chromic acid to lower and middle turbinates, under cocaine, but does not go far back. Such an application cures symptoms of cold in head for 18 hours, but often has a magical effect, the patient being free from the sensations of hay

fever during this time. Thinks the result due to the decided impression made on the nervous system by the nasal irritation, and that it is a form of suggestion. This explains the good results of those who employ asepsis. EWING.

Nasal Lupus—DR. HOLLÄNDER—*Berliner Klin. Wochenschr.*—June 12, 1899.

The disease is divided by the author into two groups. In the first he includes the severer forms of real skin lupus. It is characterized by its extensive attack, sometimes involving a large part of the face, scalp and neck. In these cases the nose may have been affected for ten or twenty years and yet no particular destruction of the organ has taken place, the shape and profile are retained, and only occasionally shall we see a general enlargement of the organ. The glands are not usually involved, and there is only a slight tendency to involvement of the upper air passages and the lungs.

The second group presents an entirely different picture. Here the process has often led to marked destruction of the nose; its course is comparatively rapid. At first the trouble is confined to the nose; later there appears a crop of lupus nodules in the vicinity of the organ. The nasal mucous membranes are always involved. Perforation of the septum is often present. Lupous involvement of the soft palate, the pharyngeal wall, the epiglottis and the whole aditus ad laryngem. There is a peculiar tendency to invade the other mucous membranes of the face, the lips, the gums, the hard palate and the conjunctiva. The glands are usually involved, and there is a strong tendency to a descending lupus of the air passages.

The second group, in all likelihood, consists of cases where the nasal mucous membrane has been primarily involved.

The author favors his own method of treatment by a stream of hot air (300° — 400°). At this temperature the lupous tissue becomes necrotic, and the tubercle bacilli are destroyed. When the hot air is turned on to parts, the skin instantly becomes absolutely ischaemic. The lupous tissue cannot participate in this active contraction of the vessels on account of the small number of vessels, and the absence of contractile tissue: it therefore seems to stand out prominently in contrast to the contracted, and shrunken skin which surrounds it. This method of treatment is especially adapted to nasal lupus, and where the air stream cannot be turned directly upon the lesion, the author has no hesitation in splitting up the nose, burning out the lupous patches, and then uniting the nose by suture.

The article is accompanied by numerous, and excellent illustrations which certainly seem to show some remarkably successful results. VITTM.

II. MOUTH AND NASO-PHARYNX.

Chronic Lacunar Tonsillitis—CHAS. E. CLARK—*Kans. City Med. Record*, Vol. xvi, No. 7, July, 1899.

Attention is called in this paper to the crudeness displayed in the classification of chronic inflammatory affections of the faucial tonsil. It also recalls that Roe emphasized the importance of a careful study of chronic lacunar tonsillitis, describing "diseased tonsils unattended by hypertrophy." The diagnosis is to be made by spraying a weak solution of cocaine into the pharynx, then with depressor, retractors, small curettes, probes, etc., each portion of the tonsillar space should be carefully explored as well as each crypt. The practitioner is then apt to find himself humiliated in having overlooked an immense follicle filled with fetid secretion. A case is related in which repeated applications of the galvano-cautery had been made to tonsillar crypts without relief to pain and general septic infection. Examination discovered enlarged, deep crypts or sinuses. The tonsils were excised with complete relief. Clark deduces that: 1. Chronic lacunar tonsillitis is a disease which should be studied and treated individually, and not under the general term of hypertrophy of the tonsils. 2. It is capable of acting as a center of infection in the production of constitutional sepsis. 3. A diagnosis should be made with the utmost precision. 4. The sinuses should be treated exactly as a sinus in any other locality, viz., by excision. EATON.

Rheumatic Tonsillitis—ABRAHAMS—*Memphis Med. Monthly*, March, 1899.

The more common varieties of rheumatic sore throat fall into two main categories—faucial erythema and tonsillitis proper. The former is more common in adults: rheumatic tonsillitis, in children, in whom it usually assumes the follicular type, quinsy being more frequent in older subjects. Faucial erythema is an initial manifestation of acute rheumatism: tonsillitis may be the actual primary lesion. Many cases are now definitely on record in which endocarditis has followed a non-scarlatinal tonsillitis unaccompanied by joint pains. In numerous other instances the tonsillitis immediately preceded an attack of arthritis or chorea. The presence of the same micro-organisms in the tonsils, joints, blood and urine is evidence in favor of the participation of pyogenic cocci in the etiology of rheumatism. SCHEPPEGRELL.

Congenital Insufficiency of the Soft Palate—GUTZMANN—*Münchener Med. Wochenschr.*, July 18, 1899.

Careful investigation has led the author to the view that nasal speech is often the result of a congenital insufficiency of the soft palate. The latter is too short, and during speech cannot apply itself closely to the eminence of Passavant. Very good results were obtained by massage of the soft palate which resulted in a lengthening of that organ. VITTUM.

Acute Pharyngitis—G. T. SWAIL—*Southwestern Med. Record*, February, 1899.

A review of the symptoms and treatment. SCHEPPEGRELL.

Late Consecutive Oro-Pharyngeal Syphilis—L. S. SOMERS—*Internat. Med. Mag.*, Vol. viii, No. 7, July, 1899.

Somers remarks that the division of syphilitic manifestations into primary, secondary and tertiary lesions, while of value in the study of the effects generally, is not distinctly marked in the oro-pharynx, the chronologic order in which the changes take place being here very irregular as compared with the dermal alternations.

The posterior pharyngeal wall is singularly exempt. Gumma, while appearing on the tongue, is more frequent on the tonsil, and is comparatively rare in other portions of this region.

The mucous plaque ("milk spot") may be seen in either early or late consecutive syphilis, and, when observed early in the course of the affection, may immediately follow the initial lesion, before any dermal manifestations have appeared. Notable also is the obstinate character of the patch, rarely, despite the most energetic medication, healing in less than two months, and more frequently appearing at intervals over a period of from four to six months or even longer.

Later in the course of the disease gumma of the tongue occurs in its non-ulcerative form, and its onset is so insidious that often the patient is unaware of their presence until ulceration results. Unlike mucous patch, gumma is not as readily diagnosed, and the history, etc., may be necessary.

The main features of the subject are illustrated by cases in the author's practice. EATON.

III. ACCESSORY SINUSES.

Diseases of the Cavities of the Nose an Important Factor in Producing Affections of the Eyes—ALBERT E. BULSON—*The Physician and Surgeon*, July, 1899.

The writer divides the cases into two classes:

(1) Pathologic conditions of the eye resulting from the passage of morbid material from the nose through the nasal duct or immediate tissue of the eye.

(2) Pathologic condition of the eye dependent on hypertrophies, deformities, or mechanical abnormalities of the nose.

The symptoms arising under the first condition are pointed out, and the necessity for a careful examination of the nasal spaces, particularly in the cases among school children, is urged.

The history of a case, resulting from an incisor tooth, driven by the kick of a horse into the cul-de-sac around the inferior turbinal, shows the conditions that may arise under the second classification.

DETWILER.

IV. LARYNX AND TRACHEA.

A Contribution to the Study of Laryngeal Gumma—H. CORDES—
Deutsche Med. Wochenschr., June 22, 1899.

Description of a case of gumma of the right vocal cord, presenting great difficulty in the diagnosis as there was no history of infection, and absolutely no other indication of syphilis to be found.

Attention is particularly called to the fact that instead of presenting an ulcerating surface, the whole tumor seemed to be covered with a firm, whitish, fibrous deposit. This the author thinks may have resulted from the situation of the gumma. VITUM.

A Case of Laryngeal Tuberculosis—R. MCKINNEY—*Memphis Med. Monthly*, January, 1899.

An interesting feature of this case is that the tubercular affection of the larynx instead of being secondary to a pulmonary affection, as is usually the case, was followed by infection of the lymphatics of the axillary and intra-clavicular regions.

SCHEPPEGRELL.

Foreign Bodies in the Air Passages, with Report of a Case—W.

D. SHIELDS—*West. Med. Rev.*, Vol. iv, No. 8, August, 1899.

The author's case was that of a boy of four years. On the previous afternoon he came into the house with something apparently fastened in his mouth, and on opening it, his mother saw a stick about the size of a lead pencil and more than an inch long go down his throat with a gasp. Patient was suffering from intense dyspnea, spasmodic cough, anxious and painful expression, at times clawing at his throat. These symptoms, with rales in the right lung, increased pulse-rate, and elevated temperature, continued for two weeks.

When first seen by the author temperature ranged from 100° in the morning to 103° in the evening; pulse, 95 to 120; increased respiration; muco-purulent sputum, occasionally tinged with blood; could not lie down comfortably. No aphonia.

The diagnosis was traumatic unilateral bronchitis from a foreign body in the right bronchus.

Some weeks after, Dr. A. F. Jonas, of Omaha, located the foreign body in the right bronchus.

The fluoroscope indicated a darkened surface, the size of a half-dollar, in this region. Under chloroform, and then ether, attempts were made to remove the body, but the child came so near dying from the anesthetic that he was sent home in hopes that the foreign body might, in time, be coughed up. The case lingered on, greatly depressing the patient's vitality, he losing twenty-two pounds in flesh. Finally the piece of wood was coughed up, and was found to be one and three-fourths inch long, and about the size of a small lead pencil. This was three months and three days after it entered the windpipe. Recovery was rapid and complete.

EATON.

Hysterical Aphonia Lasting for Eleven Years—LENNOX BROWNE—*Jour. L., R. et O.*, June, 1899.

This condition occurred in a female, after a severe mental shock. The individual was mute for three or four years. She then began to whisper, and in the past two years developed a deep, rough voice, which was produced by vibration of the false cords, as seen by the laryngoscope. Different methods of treatment were tried without effect. After exposure to great excitement the voice suddenly returned to normal, and has so remained.

LEDERMAN.

Statistics as to the Lateral Correspondence Between Laryngeal and Pulmonary Tuberculosis—CARL MAGENAU—*Archiv für Laryngol.*, Band ix, Heft 2, 1899.

These statistics, embracing 400 cases of laryngo-pulmonary tuberculosis, were compiled for the purpose of comparing them with those of Krieg. The latter author combats the view that infection from the lungs to the larynx occurs by way of respiration or sputum, and contends that the path traveled by the germs is through the blood and lymph circulation. His statistics show that in cases of pure unilateral involvement of both lung and larynx, the same side is affected in 91.6 per cent.

The present statistics, however, give a much smaller (40) per cent under like conditions. The statistics were very carefully prepared and all doubtful cases thrown out. His conclusion is, therefore, that while Krieg's theory may be correct, it is not proven so by any statistical evidence. He very sensibly concludes that the evidence of the bacilli being carried from the lung to the larynx by way of the blood and lymph will never rest upon statistics alone, but that we must look for the proof in the future investigations of physiology, anatomy and pathological anatomy.

VITTM.

V. EAR.

A Note upon Aural Vertigo (Meniere's Disease) and the Organ of Equilibration—L. HARRISON METTLER, M.D., Chicago——*Medicine*, August, 1899.

The nucleus of Deiters is selected by the author to be the real center of equilibrium. It is situated in the outer angle of the floor of the fourth ventricle, and in the restiform body near the ventral portion of the cerebellum. It is the terminus of the vestibular fibers of the auditory nerve. It has connection with the nuclei of the third, sixth and probably fourth cranial nerves. Sensory impressions are brought to it from remote parts of the general muscular system, and the viscera. The belief long held that it was purely sensory in function, subserving the sense of hearing, has been supplanted by the present knowledge that it is the meeting-place of an immense number of special sensory and motor impulses. Hence a vertigo may be produced by an irritation of any of its ramifications.

STEIN.

Ossification of the External Ear—WASSMUND—*Deutsche Med. Wochenschr.*, July 6, 1899.

The author reports a case of this rare affection which, together with the five previously reported, makes a total of six on record. The trouble seems to occur as a result of some special irritation and relaxation of the vessels. In the case under consideration it followed a frostbite. The ossification involved mainly the middle part of the auricle, and gave rise to no inconvenience unless the patient lay for some time with the affected ear resting on a hard object.

VITTUM.

A Report of Actual Cases Demonstrating the Relief, by Modern Methods, of Patients Hopelessly Afflicted for Many Years with Deafness from Catarrh, Running Ears, Etc.—ROBERT BARCLAY—*Med. Rev.*, Vol. xl, No. 2, July, 1899.

The author, while "aware that many otologists appear to have given up the operation of ossiculectomy upon the middle-ear structures in deafness from catarrh, disappointed in their results, others—among them, myself—finds that the mere relief of tension, always abnormal in these cases, is sufficient to justify the operation, inasmuch as it relieves the labyrinth of inevitable still further secondary invasion and preserves the integrity of function of the auditory nerve, not only in this ear, but in its fellow of the opposite side." In cases not presumably or manifestly incurable, he claims that as regards the advantages of increased mobility of the conducting mechanism experience shows that the operation invariably improves the hearing. He cites ten of his own cases to prove his point.

[This article is in parts vague, and fails "to demonstrate to your satisfaction" that the operation will do what the author claims, since he is reticent as to the exact conditions of the ears treated, and as to his methods.]

EATON.

The Diagnosis of Septic Diseases of the Brain and Its Membranes from the Standpoint of the Oculist and Aurist—EUGENE SMITH—*The Physician and Surgeon*, August, 1899.

The writer, after calling attention to various symptoms of cerebral disease manifested in the eye, and urging thorough examination of this organ, says: It is in the middle ear and mastoid antrum where most of the pathogenic processes generate, which afterwards spread intracranially and affect the brain and its membranes. An extensive inflammatory disease of the middle ear may exist without any discharge from the external ear and without perforation of the drum membrane. Chronic purulent diseases of the middle ear, however, are the ones most prone to cause extension of the pathogenic process to the brain cavity.

A suppurative otitis media with erosion of the tegmen tympani is often, if not always, accompanied by a meningitis sufficient to produce an optic neuritis. Again, if the inflammation in the tympanic cavity were sufficient to produce an effect on the carotid

plexus of the sympathetic, it might easily cause irritation in the perivascular sheaths of the carotid venous plexus as well as in those veins that pass directly from the tympanic cavity into the membranes. Thromboses of the cranial sinuses, particularly of the lateral sinus, are not infrequent as a result of middle-ear disease.

DETWILER.

A Case of Middle-Ear Disease Simulating Meniere's Disease—

WM. L. BALLENGER—*Journ. Am. Med. Assn.*, August 12, 1899.

The case reported is that of a man, forty-one years old, who has the usual symptoms of Meniere's disease, except that the attacks are temporary, and recurring. They usually last from two weeks to a few months. Inflation of the middle ear improves the hearing and relieves the pain in the head, the nausea and the dizziness.

Examination of the ears shows retraction of the drum membranes, especially of the left. Bone conduction absent in left ear. Inflation brings bone conduction almost up to normal.

The doctor concludes that the symptoms are caused by the extreme retraction of the drum membrane, driving the foot-plate of the stapes into the oval window, thereby increasing the intra-labyrinthine pressure.

ANDREWS.

The Treatment of Diseases of the Ear—W. F. STRANGWAYS—

Physician and Surgeon. August, 1899.

The writer claims that harm is often done by the routine use of the syringe for cleansing the ears. His method of cleansing the external and middle ear is by wiping with absorbent cotton applied on slender, flexible applicators. By this means, with the occasional use of Auel's lachrymal syringe, having a long, slender end piece, and with air inflation, all parts of the middle ear may be reached through the ordinary perforation.

He considers peroxide of hydrogen of little value in this line of work, but speaks highly of tincture of iodine. This drug aborts furuncles, allays itching and banishes chronic and sub-acute inflammatory troubles if there is no discharge from the middle ear.

DETWILER.

VII. INSTRUMENTS AND THERAPY.

A Modified Siegel's Pneumatic Aural Speculum—CHARLES H.

BURNETT—*Journal Am. Med. Assn.*, June 3, 1899.

The instrument is of metal, highly polished inside and out. It closely resembles the hard rubber Siegel's instrument. The small end is made oval to more accurately fit the external auditory canal. The outside of this end widens rapidly for a distance of one centimeter, thus insuring a fit in any adult meatus without the addition of rubber packing or of replacing with a larger or smaller speculum as is necessary in the use of the original instrument.

ANDREWS.

Argyria—M. MENZEL—*Wiener Klin. Wochenschr.*, No. 20, 1899.

Report of a case which resulted from frequently painting the pharynx and larynx with a 5 per cent to 10 per cent solution of nitrate of silver during a period of nine and one-half years. Aside from the local discoloration there was an argyria of the face and neck and of the back of the hands—those portions of the skin most exposed to light. This patient's color varied somewhat, according as the skin became congested or anemic. The darker color corresponded to a flushed face, while a steel-gray color indicated paleness. This patient, singularly enough, showed abstinence symptoms when a considerable time was allowed to pass without his coming in contact with the silver solution. He was unfit for work, irritable, restless and sleepless. These symptoms appeared when he had been two or three weeks without treatment, but disappeared at once when the pharynx was painted with the silver solution. The author is at a loss to know whether there was really an addiction, such as takes place with morphia, arsenic, etc., or whether the symptoms resulted from some sort of auto-suggestion.

The author thinks that if the person is kept from all contact with silver salts for a long time, the argyria will very slowly disappear. Iodide of potash has been recommended in this trouble, but it is doubtful whether any results have been obtained. VITUM.

A Further Contribution to the Therapeutics of Heroin—A. HOLT-KAMP—*Monograph*.

The author employed heroin in over 180 cases and pronounces a fairly positive opinion regarding the pharmaco-dynamic properties of this preparation. He states "this remedy has completely fulfilled expectations in all cases in which it was indicated, and has never manifested unpleasant or injurious effects. I have made use of heroin in 122 cases of acute and chronic laryngitis and bronchitis, in 12 cases of pleuritis with extremely distressing, irritating cough and intense chest pains; in 5 cases of whooping cough, in 7 cases of sciatica and muscular rheumatisms in 13 cases of cardialgia, in 23 cases of violent pains in the gastro-intestinal form of influenza, and in 5 cases of general nervousness and sleeplessness. The clinical material consisted of persons of both sexes, of every age and constitution, and in all but a few cases heroin was successful.

In acute laryngitis and bronchitis of adults I prescribed 3 times daily 0.005 gm., while in severe cases in which the cough disturbed the night's rest, 0.005 were given in the forenoon and afternoon, and 0.01 at about 10 o'clock in the evening, after which a refreshing sleep usually ensued. The sleep produced was always quiet, without the least disturbance on the following morning. I have employed heroin in 5 cases of phthisis with fever and marked cough, giving 2 doses of 0.005 gm. within 2 hours in the evening, with the result that sleep always occurred with a reduction of temperature of 0.6–1.3 degrees and diminution of the night-sweats.

Heroin acted very promptly in 10 cases of dry pleurisy, but in one case of undoubted tuberculous character morphine acted more efficiently. In 5 children, ranging in age from two to seven years, I made a trial of this preparation for the purpose of arresting the most violent paroxysms of whooping cough. According to the age, I prescribed it in doses of 0.0005 to 0.002 gm. 3 times daily, and in 4 cases was gratified to note, after 2 days, a considerable amelioration of the attacks, both as regards frequency and intensity. The children were easily affected by heroin, and hence it is necessary to be careful in the doses. Although this preparation is no direct curative agent against whooping cough, the prompt relief of the attacks in frequency and intensity is certainly worthy of attention, and it would be desirable to continue the experiment with heroin or its use in connection with other medicaments."

BOOK REVIEWS.

Diseases of the Ear. By ALBERT H. BUCK, M.D., Clinical Professor of the Diseases of the Ear, College of Physicians and Surgeons, Medical Department of Columbia University, New York; Consulting Aural Surgeon, New York Eye and Ear Infirmary, and the Presbyterian Hospital. Third Revised Edition. Wm. Wood & Co., New York.

Buck's well-known Manual has developed into an elaborate "Treatise on the Diseases of the Ear," otherwise it would be a work of supererogation for us to review a book so well known to all otologists. In several revised editions Dr. Buck has sought to keep his Manual abreast of the times, but so great have been the strides of otology in recent years that to bring within its scope present knowledge has necessitated its almost complete re-writing. It has not been long since the importance of the nasal passages and rhinopharynx to the middle ear was recognized, and the field of otology much enlarged from their acquisition. A general revision of modern otological literature became necessary. Now, that the aural practitioner has become an aural surgeon by taking for his province certain affections of the brain, meninges and sinus, adding to our knowledge of them, no work on otology that pretends to tell it all can slight this new, and to him most interesting and important department of his specialty. The time has gone when aural specialists, anxious to produce a respectable looking volume on the ear, must resort to thick paper, short lines and large letters in order that it may not be possible to pigeonhole their "complete treatise" in the ordinary office desk. Dr. Buck's book has been enlarged in length, width and bulk. The earlier chapters have been re-arranged, and new matter inserted, and several new chapters, dealing specifically and elaborately with intracranial diseases affecting the auditory apparatus, added. The editions bring the work thoroughly up to date, and as it comes to us in this new edition we consider it one of the very best American productions on the subject. F. C. E.

A Manual of Otology. By GORHAM BACON, A.M., M.D., Professor of Otology in Cornell University Medical College, New York. With an Introductory Chapter by CLARENCE J. BLAKE, M.D., Professor of Otology in the Harvard Medical School, Boston, Mass. In one handsome 12mo. volume of 400 pages, with 109 engravings and a colored plate. Cloth, \$2.00, net.

A text book on Anatomy is in every medico's library, be he student or practitioner. This being true we are unable to appreciate the necessity for including the anatomy of the ear in a Manual of Otology the size of Dr. Bacon's. Otology is a study for advanced students, and practitioners who have been through anatomy, and if in their reading they happen to find themselves in the dark upon any particular structure enlightenment is always at hand. The otological science of the specialist cannot by any perfection of condensation be compressed within the space Dr. Bacon has allotted to himself, and as something had to be left out a wiser discrimination would have eliminated anatomy which of necessity would be less complete than that in a treatise dealing with the entire subject.

Nevertheless, as a text book for the over-crammed student and as a reference work for the busy general practitioner, who cannot hope to know it all, the Manual before us conforms more nearly to the proper size than any work we know. All others are too large or too small, they contain much too much or too little. The author, on the whole, has shown a wise discrimination in his divisions of space, and the emphasis laid upon the various affections. The chapter on the important subject of mastoid disease is particularly clear, and full, as is also the newer pathology of the sinus and meninges. The colored plate representing "Abscess of the Cerebellum Secondary to Chronic Suppurative Otitis Media" is beautifully executed.

F. C. E.

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ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
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RHEUMATOID ARTHRITIS IN CHRONIC DISEASE OF THE MIDDLE EAR.

BY R. A. BAYLISS, M.R.C.S. (ENG.), L.R.C.P. (LOND.)

Late Resident Medical Officer to the Royal Mineral Water Hospital, Bath, Etc.

Much has been written from time to time with regard to chronic non-suppurating disease of the middle ear, and considerable ingenuity has been expended in framing a nomenclature for this class of case. Under the heading of "Chronic Catarrhal Inflammation of the Middle Ear, Sclerosis" (von Tröltsch), "Chronic Adhesive Catarrh" (Hovell), "Otitis Media Hypertrophica" (Gruber), and "Proliferous Catarrh" (Rossa), the disease has been most carefully described. The pathological conditions too have been very exhaustively set forth by Politzer and Gruber, and they, along with most other otologists, appear to consider that the disease generally commences in the mucous membrane lining the tympanum, which undergoes a process of chronic interstitial inflammation and subsequent shrinking and atrophy and even calcification. Impaired movement of the ossicles, especially at the stapedio-vestibular joint, and their eventual complete ankylosis, is regarded as occurring in the later stages.

Again, with regard to the etiology of this affection, most writers are agreed that chronic catarrh of the naso-pharynx is one of the commonest causes of the disease. Gruber¹ points out that plastic inflammation occurs more often in robust, plethoric people, and its existence in the naso-pharynx often gives rise to a similar affection of the middle ear, both of which are as a rule involved, either

simultaneously or after a short interval. In speaking of ankylosis he says: "Rheumatic affections are stated to be of common occurrence in patients with such conditions." Hovell,² in detailing the causes which give rise to chronic adhesive catarrh of the middle ear, remarks that "sometimes there is a history of syphilis, scrofula, gout, or rheumatism; hereditary predisposition to aural disease is often traceable."

McBride³ says, "with a view to determining the relation between chronic fibroid changes in the middle ear and rheumatism, I at one time investigated all my private cases in this direction. It soon became evident, however, that only in those cases which were directly traceable to a rheumatic attack could any distinct connection be proved."

Urban Pritchard⁴ admits the undoubted influence of rheumatism and gout in affections of the middle ear "through their action upon the joints of the ossicles," and suggests suitable constitutional treatment to combat these diatheses.

Field,⁵ referring to the investigations of Ladreit de Lacharrien, says "as causes of congestion and ankylosis of the joints of the ossicula auditus, he distinguishes, independent of catarrh, three diatheses—the arthritic (evidenced in rheumatism, gout and also migraine), the herpetic and the syphilitic. Several times he has observed the manifestation of an affection of the ossicles to coincide with the disappearance of rheumatism of the shoulder and neck, and vice-versa."

At the recent International Otological Congress⁶ Professor v. Uchermann read a paper on "Rheumatic Disease of the Ear," and after describing cases in which an acute affection of the middle ear was distinctly associated with an attack of rheumatic fever, goes on to observe that he believes that in more chronic cases of rheumatism the ear may become affected in a less acute and violent manner, but sometimes with a more serious result for the organ itself.

So far it would appear that the influence attributed to rheumatism and its allies in the causation of chronic affections of the middle ear varies somewhat, according to the views of different observers, though most of them seem to recognize the rheumatic state as an etiological factor in the production of the disease.

During the time I was Resident Medical Officer at the Royal Mineral Water Hospital, Bath, I was much struck with the fact that a large number of the patients, who were afflicted with rheumatic arthritis, were extremely deaf. On making inquiry into these cases, no antecedent history of scarlet fever, purulent discharge, or chronic

naso-pharyngeal catarrh could be obtained, the majority asserting that the onset of the deafness had been very gradual, until it had extended over a considerable period of time, and had been progressively getting worse. As a rule both ears were affected, and generally to a similar degree. In addition, the patients were often the victims of troublesome tinnitus and other subjective noises in the head. On applying the customary tests, it was usual to find the loss of hearing was distinctly worse for the lower tones, though sometimes the watch was quite inaudible, unless held close to the auricle, and even then occasionally not at all.

With the tuning fork, Rinne's test gave nearly always a marked negative. On applying the fork to the vertex, a positive result was obtained on one side or another, though sometimes the patient was unable to differentiate between the intensity of the sound conveyed to each ear. There was nothing particularly striking in the appearance of the membrana tympani, the drumhead as a rule being somewhat thickened and indrawn, the handle of the malleus foreshortened, and the anterior posterior folds accentuated. Politzerization generally demonstrated the fact that the Eustachian tubes were pervious, though in some cases there was a little difficulty to the introduction of air into the tympanum. Treatment by Politzerization or the performance of Valsalva's experiment caused only a very slight improvement, and massage of the ossicles by Siegle's suction speculum was likewise of little benefit.

So far, both as to diagnosis and the result of treatment, there is not much to differentiate these cases from the ordinary ones of chronic middle-ear disease of a sclerotic kind. I am of an opinion, however, that in considering the matter from a pathological point of view, we have here to deal with a primary affection of the ossicular joints. Rheumatoid arthritis is essentially a polyarticular affection, and there seems no reason why these minute joints should be exempt from the morbid process, more especially so, too, as cartilage, which enters largely into their structure, is so very prone to degeneration of a rheumatoidal kind. The tendency of rheumatoid joints to become rapidly ankylosed, unless movement be persisted in, applies with great force to the articulations of the bones of the ear, and is not at all to be wondered at, when we consider what would be the case if a large joint like the knee, affected with this disease, was early allowed to become immovable. This, I think, fully accounts for the usual hopeless results of most methods of treatment, as by the time the patient seeks advice for his deafness, the bones of his ear are most probably completely fixed and rigid.

It seems to me, therefore, that we have a chronic inflammatory process going on in these tiny joints, with cartilaginous degeneration and subsequent erosion of bone, eventually leading to complete ankylosis. In fact, changes are taking place in every way similar to those observed in the larger joints of the body at the same time.

That occasional acute exacerbations of this inflammatory mischief may from time to time occur, I am firmly convinced, and in one or two cases patients have complained of severe pain in the ear, which has subsided in a few days, examination revealing nothing, with the exception of some injection of the vessels of the membrana in the neighborhood of the handle of the malleus.

Of the ossicular joints, that formed by the junction of the foot-plate of the stapes with the fenestra ovalis is probably the most extensively affected, and the loss of mobility at this articulation giving rise to increased intralabyrinthine pressure, accounts for the numerous subjective sensations in the head, which patients, the victims of this disease, so often complain of. The impaired movement in the joint connecting the malleus and the incus, and its subsequent contraction, causes the former bone to be somewhat rotated, giving the foreshortened appearance which can be observed on examination through a speculum.

Unfortunately there is at present, as far as I know, no definite pathological evidence which can be adduced in favor of these views, as patients suffering from rheumatoid arthritis but rarely die in hospital, where the necessary and very careful examination of the structures of the ear could be made; but everything seems to point, by analogy and observation, to this explanation of the various phenomena of the disease as being the true one.

With regard to treatment. It will be gathered from the remarks previously made, that the patients I had under observation when in hospital failed to be benefited to any great extent by the ordinary measures, and in a general way any amelioration of their symptoms by routine local methods may be considered to have been more or less hopeless. Granting this, however, I think one ought first of all to satisfy oneself that the Eustachian tube is quite pervious, admitting of free inflation of the middle ear, and during the performance of Politzerization it is well to carefully observe the membrana tympani with a view to seeing to what extent it moves. If the drum-head is not very much indrawn, daily Politzerization and suction, by means of Siegle's speculum or Delstanche's masseur, may restore to the ossicles some of their lost mobility. The employment of Lucae's spring probe, producing pressure on the handle of the malleus, is also a useful adjunct to other treatment, and has sometimes a beneficial action.

If, in spite of these procedures, the deafness is not at all diminished and the subjective sensations in the head are a source of worry and annoyance to the patient, it becomes a question for consideration whether some more radical measures might not with advantage be taken. Excision of a portion of the membrane, or even the performance of one of the several operations, devised for the removal of one or more of the ossicles, might be attended with good results, but such operations should not in my opinion be lightly undertaken. Apart from the considerable risk attendant on all operations on the middle ear, there is always the chance that the hearing will practically not be improved. It will be well, too, before resorting to any of these methods, to ascertain as far as possible whether the perceptive apparatus is in any degree involved, as if so, this will militate very much against the prospects of a cure; indeed if bone conduction is manifestly impaired, it seems to me that an operation is not only unjustifiable, but absolutely useless.

Suitable constitutional treatment for the general rheumatoidal condition should of course be adopted, and in the acute exacerbations of inflammation accompanied by pain.

Salicylate of soda may be administered internally, with the application of a blister behind the ear, and gentle irrigation of the meatus with warm water.

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SHALL WE USE COLD IN ACUTE MIDDLE EAR OR MASTOID AFFECTIONS; IF SO, HOW LONG?*

BY J. OSCROFT TANSLEY, M.D., NEW YORK.

In considering before you the subject of "Shall We Use Cold in the Treatment of Acute Middle Ear or Mastoid Affections, and if so, How Long?" it is hardly meet that we should consume much of our limited time in considering the history of this procedure, and it is not my desire to do so. Suffice it to say that there are to-day many advocates of the use of the cold water coil or ice bag in the treatment of these affections, particularly of mastoiditis, and they give numerous reasons for this belief. When I began the observation and treatment of this class of diseases some twenty-five years ago, under the tutelage and direction of Dr. C. R. Agnew, acute processes of the middle ear were invariably treated with dry or moist heat, accordingly as there was not or was a secretion present, and all mastoidities were treated by hot poultices, and naturally I pursued this course, and must confess that I lean strongly in that direction to-day.

In the treatment of acute inflammation of the eye there are very few who consider the use of cold any benefit whatever in any diseases deeper in the eye than iritis or cyclitis, and there are many who say that there is no benefit in the use of cold in these two diseases. Personally, I always use continuous cold in cases of iritis and cyclitis, and, as an instance, I will mention a case which I treated last summer, where a cyclitis developed ten days after an operation for cataract, in which, after using atropine, "coup sa coup" leeches, salivation, etc., with no improvement, and began to see the possibility of losing the eye and the almost certainty of the fellow eye being affected sympathetically. I then began the use of cold evaporating cloths, and kept them applied continuously twenty-four hours a day for eight weeks, the result being $\frac{20}{30}$ vision, a movable iris and no synechia.

In the treatment of eye diseases the cold can be brought very close to the seat of inflammation, but in ear diseases this cannot be done. Middle-ear diseases become serious to life only when the attic becomes implicated, and every attical case is almost necessarily a mas-

* Read before the American Otological Society, July, 1899.

toid one, and to apply cold it is impossible to get it nearer than an inch or an inch and a half. It seems to me much more sensible to use the cold in the form of a douche, but I have yet failed to meet or hear of the man sufficiently heroic to use the cold douche. Cold, we know, does restrain microbes if used beyond a certain point, so also does heat. The question is: Are we able to obtain that amount of restraining cold in an ear or mastoid? I think not. In the twenty-five years in which I have been observing these cases I have seen it used a number of times and have used it a few times myself, but I have invariably come to the conclusion that those cases which got well while the cold was used would have done so without, and those cases which subsequently needed an operation I failed to see any relieving or curative effect whatever.

I had one remarkable case in the summer of 1898 in which the cold ice bag was used in a most heroic manner, and it will be very pertinent for me to give a concise history of the case. The case was not under my care at the beginning of the trouble, and was as follows:

A. M., age forty-five, born in Ireland, workingman of excellent and remarkably healthy physique. April 26, 1898, had severe pain in right ear, so much so as to prevent his working. Saw a dispensary doctor upon the evening of that day, and the next day visited the Roosevelt Hospital as an out patient, at which time the doctor perforated the drum, applied leeches and advised the immediate application of ice bags to and behind the ear. The patient was under this and another doctor's care, and the ice bag was continuously applied night and day until the evening of May 23d. at which time I was sent for and saw him. I found the patient quite depressed and troubled from want of sleep. A discharging ear, a tender mastoid, which pitted upon strong pressure, but not swelled to any great extent. Temperature, $99\frac{3}{5}^{\circ}$; pulse, 70.

I operated the next day, May 24th, and found the whole external shell of the mastoid necrotic and soft; a large antrum full of bloody pus. I chiseled and curetted the whole anterior and lateral wall of the mastoid away from apex to temporal ridge, removed considerable polypoid material and necrotic bone from the cavity, posteriorly, superiorly and anteriorly, passing directly into the attic, and left no diseased bone anywhere, so far as I could determine by inspection and by probe; syringed the cavity with 1 to 5000 bichlor. solution, the solution passing freely from mastoid to and out of external canal and equally free from the canal out of the mastoid opening. The peculiarities of the case was the amount of bleeding, the injection,

and the pulpy, broken-down condition of the bone. I remarked to my assistants at the time that this was undoubtedly due to the long continuance of the ice bag. The usual bandage was applied and the usual treatment pursued in such cases, and he was seemingly entirely relieved in every way, certainly so far as pain or inability to sleep was concerned. I saw him daily, and his pulse and temperature remained normal. The mastoid healed nicely, but there was a small amount of discharge from the ear. It is unnecessary for me to give the daily happenings, for they were uneventful, and upon the morning of June 28th he seemed nicely at the dressing, but in the afternoon he returned with some pain and a temperature of 101° . June 29th the whole left side of the head was swelled and edematous. The ear swelled to twice its size and the left eye almost closed with edema. I sent him to the Manhattan Eye and Ear Hospital, with which I had been previously connected as surgeon, and the patient passed into the care of my former assistant, Dr. Lederman, whose notes of the case I will now give:

“Through the kindness of Dr. Tansley, Mr. A. M., forty-four years of age, was referred to my clinic at the Manhattan Eye and Ear Hospital on June 29, 1898, for further surgical exploration, owing to a reappearance of septic symptoms.

“About five weeks previous to his admission an operation was performed by Dr. Tansley upon his left mastoid for acute disease of this process due to the extension of an acute suppurative otitis media.

“The wound healed nicely and the patient's condition greatly improved. Suppuration through the external auditory meatus persisted, however, until yesterday, June 28, 1898, when the discharge suddenly ceased, and Mr. M. began to experience pain in the region of the mastoid. On my examination, June 20th, I found some bulging of the membrana attica, with prominence of the posterior wall of the external auditory canal. A fresh scar on left mastoid was seen, with skin over the mastoid somewhat inflamed, acute tenderness of the process existed upon pressure, and deep-seated pain was also experienced and extended over the left side of the head. A lateral nystagmus of both eyes was noticed, but this condition, the patient said, was congenital. His pulse was 120 and temperature by mouth was $100\frac{1}{2}^{\circ}$ F.

“Suspecting acute disease, I advised immediate operation. The former line of incision was followed, and an opening was found in the mastoid about upon a line with the lower border of the external meatus. Granulation tissue filled in the site of the first operation.

After curetting away all the granulation tissue the posterior wall of the external canal was found necrotic and what remained of the mastoid tip was also diseased.

"The involved structure was removed by means of chisel and rougeur. Considerable pus escaped from the mastoid antrum, and after thoroughly cleansing the cavity, pus was discovered exuding freely from a sinus leading upwards above the antrum. On exploring the sinus, the probe led to the floor of the cerebral cavity.

"This fistula was considerably enlarged with a curette, and upon reaching the dura mater a large amount of pus escaped from an epidural abscess.

"The mastoid structure was unusually thick, and fully an inch and a half in depth was reached before the abscess cavity was entered. The pocket of pus was bounded above by the dura and below by the tegmen tympani. The lateral sinus was not affected though much bone was removed in its immediate vicinity.

"Gentle cleaning of the cerebral wound completed the operation. The usual mastoid dressing was applied, the bone wound being lightly packed with iodoform gauze.

"The patient suffered from considerable shock, but responded promptly to stimulants and heat.

"On July 1st the wound was dressed for the first time. Little discharge from mastoid opening and canal was noticed, and the patient was quite comfortable, with normal temperature and pulse.

"*July 6th.*—Wound healing nicely: no discharge from abscess cavity, but considerable pus from external canal. Boric acid douching was ordered t. i. d.

"*July 15th.*—Mastoid wound filling in rapidly and only slight amount of canal discharge.

"*July 20th.*—There was no discharge from the canal or mastoid. From this date the patient made a rapid recovery, and was discharged cured, in good general health, on August 17, 1898."

To recapitulate, we find that the patient in the early period of his trouble applied ice bags to his ear continuously for twenty-seven days. To all this must appear an unusually heroic dependence upon this procedure, and if it is to be considered curative there certainly was an opportunity to prove it so in this case. It simply restrained the pain and kept down the external swelling, or, in other words, masked the case and made the operation which I performed unusually difficult; in fact, I never operated upon a case in which there was a tithe of the difficulty to distinguish between healthy and diseased bone as there was in this.

The patient had been seen daily by me during the thirty-six days subsequent to the first operation and before the second operation, and although I have learned since that he had been imprudent he had had fairly good care, and I am convinced that I failed to remove all of the diseased tissue and bone, and as I am usually considered to have the tactus and visus evuditis, having had extensive experience with such cases, I am forced to the conclusion that the tissues and bone was so depressed in vitality by the long-continued freezing that what appeared healthy at the time of operation broke down subsequently or was too depressed to recuperate or withstand the microbic invasion.

My conclusions in this case are in keeping with my previous experience in less serious cases where ice has been used, and I have to iterate the statement I made above, that the cases which apparently get well from the use of ice would have done better without it, and in those cases which have to be operated upon subsequently the sole result of the use of ice has been to make the operation more difficult.

We have looked at this subject from a purely clinical aspect and in the light of my personal experience. Let us see what the bacteriologist has to say. In this matter I have been materially assisted by my dear friend, Israel Straus, M.D., at present connected with Mount Sinai Hospital, New York, who is himself a very able student in this department. The following report of the bacteriological findings in 144 mastoid cases by Dr. Orn Greene, of Boston, in the *Journal of the Boston Society of Medical Sciences*, No. 3, from 1898 to 1899, and the cultures were made from the pus taken at the time of the operations and from the cases which I have seen personally, it seems a pretty good bacteriological analysis:

There were found:

Staphylococcus alone.....	19 times
Staphylococcus and pneumococcus	10 times
Staphylococcus and streptococcus	13 times
Staphylococcus and bacteria fetidus	3 times
Staphylococcus and streptococcus and pneumococcus	3 times
Staphylococcus and pneumococcus and fetidus	1 time

Summary:

Staphylococcus was found	49 times
Streptococcus was found.....	37 times
Pneumococcus was found	23 times
Pyocyamus was found	8 times
Bacteria diphteria and capsule bacteria was found	1 time

Now as to the life of these bacteria:

- Staphylococcus:** Lives from 56 to 100 days in dried pus.
 80° C. or 176° F. Dry heat kills in one hour.
 110° C. or 230° F. Dry heat kills rapidly.
 70° C. or 158° F. Moist heat kills rapidly.
 They grow the worst at 6° C. or 42° F.
 They grow the best at 30° to 37° C. or 98° F.
 Live for 66 days in ice, so says Pruden.
- Streptococcus:** Grows slowly at 37° C. or 98° F.
 No growth over 47° C. or 117° F.
 At 23° C. or 76° F. grows slow but lives longer.
- Pneumococcus:** Grows rapidly at 37° C. or 98° F.
 Grows slowly and often not at all at 22° C. or 48° F.
 Does not grow when solid at a temperature above 39° C. or 102° F.
 Or in fluid media at 42° C. or 108° F.
- Pyocyanus:** Grows rapidly at the ordinary temperature of a living room.

I have not been able to get the exact minimum temperature in all cases, but in respect to that point note the following from Flugge:

“Die Micro-organismen.” “In low temperatures bacteria are generally very resistant.” “If the temperature is not excessively low and the effect of the cold is not of too long duration, the life of most bacteria generally withstand it.” “As a rule in our climate (Germany) the bacteria for the most part can resist the winter cold even if the temperature falls to a very low degree.”

It will be seen by this that the heat necessary to kill is impossible to attain and the necessary cold to kill is doubly impossible, for, if we accept Pruden's statement, we could freeze a middle ear and mastoid solid for sixty-six days and our microbes would still be lively, and if we accept Flugge we could submit our mastoids to the freezing cold of winter and still our microbes would prosper. It would seem then that cold is of little use in the treatment of middle ear or mastoid affections. Some advocates say use it for twenty-four or forty-eight hours, and then, if no benefit, desist.

I answer this by saying that ice will not kill the microbes, and all it will do is to restrain pain and keep down the external swelling, and as all who see many of these cases know, the positive indications for operation are so few that we cannot afford to part with pain and swelling externally, and I wish to put myself upon record as being opposed to the use of cold in any manner or for any length of time.

I recognize no contra-indication to operative procedure other than cosmetics, and am in favor of an early operation, particularly if the middle-ear difficulty is or has been an attical one.

EPIDEMIC OF PHARYNGEAL AND TONSILAR INFLAMMATION AND ITS CAUSE.

BY EDWARD VESTAL MOCK, M.D., CAMBRIDGE, ILL.

Late House Physician to the Alms and Workhouse Hospitals, Blackwell's Island, New York City.

On several occasions, when I have had opportunity to observe an epidemic of throat cases, I have endeavored to discover some cause other than the throat trouble, for I have been convinced that the specific lesion was not in the throat, and have thought the cases were a mild form of some of the fevers in which there is throat complications generally, but without the appearance of the positive symptoms whereby a diagnosis could be proven. For this reason I have thought this series of cases, which have come under my observation during the last three weeks, might prove of interest to others and offer a solution to throat epidemics and prove a warning when such epidemics occur.

Case I. Female, two and one-half years old, hydrocephalic. Was called on account of a severe sore throat. Child had been cross and fretful for four or five days previous. On the morning when I was called the mother had noticed a swelling externally over tonsil and a high fever; I found the patient with a temperature of 102° , rapid, irregular pulse, with the tonsils and throat inflamed and swollen, but could find no lesion. There was a nauseating odor from the mouth, which disappeared after cleansing. The next morning the temperature was slightly higher, skin very red, a strawberry tongue, the tonsils swollen, excoriated and covered with white patches. The entire mucous lining of the mouth, pharynx and nasopharynx was covered with small white blebs which discharged and disappeared in three days. The only treatment employed was cold sponging and the application of a 10 per cent solution of silver nitrate to the throat. The fever ended by crises the evening of the second day after I was called and three days later the patient was entirely recovered.

Case II. Male, five years old, brother of first patient. Had general "Malaise" four days and then ran the same symptoms as Case I, with the exception of a higher temperature. His fever ended by crises the evening of the second day and when I called the third day patient was feeling well and was out at play.

The next nine cases were four males and four females under twenty years of age and one male twenty-six. Of these, two had the strawberry appearance of the tongue, and in all I was able to obtain history of almost daily association. They all ran the same symptoms in a greater or less degree, as Cases I and II, with the exception of the eruption in the mouth, which was absent in these cases.

Case XVII. Female, ten years old, was employed as a nurse for Case I, but had been discharged three days previous to the appearance of the eruption in the mouth. Without previous symptoms this patient vomited, had a severe pain in the back of her head, and a few hours later developed the same throat symptoms as the cases cited. I found her with a temperature of 103°, rapid, irregular pulse, and the next day with a typical scarlet fever rash. Since then she has run a mild case of scarlet fever without complication.

Case XVIII. Female, twelve years old, sister of Case XII, has run a mild case of scarlatina, with the same throat symptoms as all the other cases.

The peculiar interest of these cases to me has been in the fact that they were undoubtedly epidemic, the throats of all being affected, that two cases showing only throat symptoms had the strawberry tongue, and two went further and developed the rash of scarlet fever and ran a course of that disease.

THE INTRATYMPANIC MASSEUR.

BY W. R. WEAVER, M.D., CHICAGO, ILL.

Professor Otolology, Laryngology and Rhinology in the Chicago Eye, Ear, Nose and Throat College.

It is needless to state that massage is recognized as having a scientific basis in physiology and pathology. Vibratory massage, that is, the rapid vibration of tissues, is known to produce curative effects somewhat akin to faradic electricity in stimulating nutrition, removing exudate, improving the mobility of the joints, and bringing about a more healthy condition of the tissues. In an attempt to produce this effect in the middle ear, I have had constructed what may be termed the "Intratympanic Masseur." The advantages of intra-

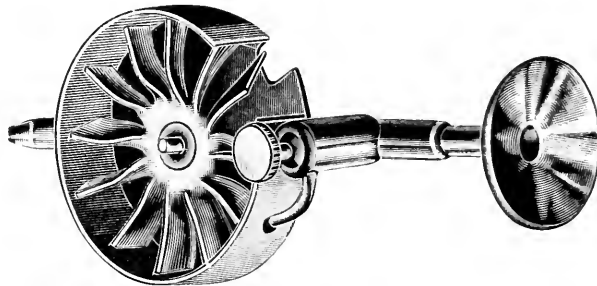


Fig. 1. Intratympanic Masseur.

tympanic treatment over treatment external to the membrana tympani are obvious. The instrument will give the best results in cases of tympanic disease where there is the least amount of Eustachian irritability.

This instrument produces a rapid vibratory massage of the tissues of the middle ear, which is probably transmitted in part to the labyrinth. It is composed essentially of a tube, fitting between the cut-off and the catheter, in which is placed a valve that cuts off the current once in each revolution. This valve is kept in motion by the impact of a small jet of air against a fan wheel attached to the stem of the valve. The whole being incased makes a neat and compact instrument which should never get out of order with ordinary usage. In the cut the cover to the motor is removed.

As constructed, it is capable of making from four to twenty revolutions of air puffs per second, which, when the Eustachian catheter is properly placed, should strike the drum membrane with about the sound of a planer in a planing mill, or slower, according to the adjustment. The massaging effect can easily be recognized by both the patient and the operator. It can be tolerated by the patient from two to ten times longer than ordinary Politzerization, producing a rather agreeable sensation, relieving soreness rather than producing it. Tinnitus aurium is rapidly relieved in all the cases in which it has been used, and the hearing power more rapidly improved in comparison with the ordinary methods of treatment.

The instrument is intended for use with about twenty to thirty-five pounds of air pressure, depending somewhat on the ease with which the air passes through the Eustachian tube, and that largely on the expert handling of the Eustachian catheter.

92 State Street.

HYSTERIA IN ITS RELATIONS TO THE UPPER AIR TRACT AND TO THE EAR.*

BY THEODOR S. FLATAU.

Translated by

W. H. VITTUM, M.D., ST. PAUL.

This excellent monograph of eighty pages covers the field of hysteria in its relation to the nose, throat and ear in a very thorough-going manner, although the reader is several times referred to other works for the more complete elucidation of certain points.

The author devotes the first ten or a dozen pages to remarks on hysteria in general, and throughout the work there are scattered many pages of speculation and theorizing as to the nature and action of this disease. Want of space, if nothing else, would prevent our entering into this subject, and this abstract will be held strictly to the points enumerated in the title. The first of the local hysterical phenomena to be noted are the various sensory disturbances throughout the region in question. These may take the form of hypesthesia, anesthesia, hyperesthesia or paresthesia. The diminished sensibility of the mucous membranes of the pharynx may exhibit all degrees up to complete anesthesia. It is generally associated in hysterical subjects with various anesthetics of the skin. It may be unilateral, corresponding to a similar skin condition. Morphine and cocaine habitués usually pass through a period of hypesthesia of the pharyngeal membranes, which, however, disappears with the abandonment of the drug.

A more commonly observed form of hysterical disturbance is that of hyperesthesia. One of the best tests of the sensory condition of the mucous membranes is the ordinary rhinological or laryngological examination. Some are so very sensitive that even a movement toward such a procedure results in active gagging and choking. Oftentimes catheterization of the tube, even though accomplished without difficulty, will be followed by a profuse secretion of tears and of watery nasal mucus, which may be prolonged through several days, associated with paroxysms of sneezing and a stinging, burning sensation. Of course, we should bear in mind that, to a certain extent, this might result from a physiological re-

* Sammlung Zwangloser Abhandlungen aus dem Gebiete der Nasen-, Ohren-, Mund- und Hals-Krankheiten, Band, iii Heft 5-6, 1899.

flex, but it is the intense and extensive reaction that forms the reflex neurosis. Paresthesia, which the author rather grimly calls the *élite* of hysterical sensory disturbances, gives rise to spontaneous sensations of pain. It has many forms and may affect all parts of our field of observation. Those cases where prolonged and intense pain follows what are ordinarily painless operations are apt to be of this nature. Hysterical otalgia is well known. Hysterical rhinalgia is also common, although not much has been written about it. It is usually located in the nasal bones and a careful examination may fail to find anything abnormal. The author recommends in certain of these cases the use of the "apparent cautery," that is, the electrode is first brought to a glow so that the patient may see it. It is then allowed to cool, is carried into the nostril and while held free in the cavity, touching no structure, the current is again turned on. This is preferably done without cocaine, in order that the patient may feel the heat and be convinced that an operation is being done.

Hysterical sore throat very commonly follows some operation in that region. Thus the removal of an adenoid or a tonsillotomy is sometimes followed by pain which lasts for years. Hysterical laryngeal pain is most frequently met with in those persons who depend peculiarly upon that organ for carrying on their occupation. For this reason we must exercise great care not to confound this condition with that of commencing exhaustion. The most noticeable difference is that hysterical pain may come on at any time, while the pain that accompanies overwork of the larynx is most apt to occur immediately after some unusual demand on its activity. Of course, if the larynx is not given its needed rest, there soon follow physical changes which will enable us to distinguish between the two troubles without difficulty. Hysterical laryngalgia may be increased during phonation so that the patient dreads to speak, and soon gets to having fears of all sorts of dread diseases, such as cancer, syphilis and tuberculosis. Among singers, actors and speakers there is a wide-spread belief in a condition known as laryngeal catarrh, which is nothing more than hysterical laryngalgia and has nothing in common with laryngeal exhaustion.

From hysterical pain we pass to the consideration of paresthesia proper. This consists generally, not in a feeling of soreness, as in the pharynx, but in a sense of painful pressure. This feeling of oppression may be either fixed or movable, and constitutes the well-known *globus hystericus*. These hysterical sensations of pressure may be attributed to all regions of the upper-air tract; the

nasal cavities, the frontal or maxillary sinus, the naso-pharynx, the oro-pharynx, the larynx, the trachea, or the ear. In the latter situation the patient complains of a feeling as though the ear were closed by a valve. No effect on the hearing is produced, however.

A hitherto undescribed hysterical affection is the sensation of nasal obstruction. This is apt to occur after adenoid operations. The patient returns to the operator after a longer or shorter period and complains that the growth has returned. A careful examination reveals the fact that the passages are perfectly clear, and yet the nasal respiration is gradually lost and the patient breathes and talks with his palate tightly drawn up against the pharyngeal wall. This generally occurs in nervous, ill-nourished children, where we might expect hysteria. The treatment is simple. After satisfying ourselves that the passage is actually clear, the finger is passed up behind the velum palati and the latter is stretched forward slightly. The patient is told that as soon as the trouble recurs the same treatment will be repeated. A cure generally follows.

Another variety of hysterical paresthesia is the feeling of foreign bodies in the passages. These may be described as of all shapes and forms. It is the commonest of experiences to have a patient come to the office demanding relief from some foreign body, "high up in the nose," "far back in the throat," or in the ear. Insects in the ear and fish bones in the throat are two very common forms of hysterical delusion. In this connection we should not lose sight of the fact that many hysterical persons do actually introduce foreign bodies into the nose and ear. Treatment for all these cases must be mental. If the patient is intelligent the real state of things may be clearly stated to him, and an appeal made that he use his will power and common sense in overcoming the delusion.

We come now to the hysterical disturbances of the sense of smell. Anosmia is the least frequent form of trouble, but may be most obstinate and unyielding. It may be periodical in its appearance. Thus it may be present during menstruation and at no other time.

Hyperosmia and parosmia are far more important troubles. Hyperosmia may be general or confined to certain limits. Thus the author states that he has a patient who cannot endure the odor of peppermint during her menstrual period, although at other times it is indifferent to her. The olfactory hyperesthesia may play an important part in social and family relations. We know that everyone has his own peculiar personal odor. Now in a case of hysterical hyperosmia, if the one affected were to take a dislike to the

odor of husband or wife most unpleasant consequences might follow. A case is cited from the author's own practice where the woman was affected with nausea to the point of vomiting by the near approach of her husband. This woman was also especially susceptible to the odor of certain plants.

In dealing with hysterical acoustic anesthesia the author adopts Gradenigo's definition. "Anesthesia in hysteria consists in a loss of the ability to synthesize impressions, or the process whereby the mind renders a sensory impression concrete by means of images." Thus is explained how a patient is subjected to the continued mastery of an idea or of an injury, the real effects of which are long past. In these cases we must beware of two sources of error. One the hysterical radiation of symptoms, "the blinding veil which covers all those cases where there is present a peripheral disturbance of the conducting apparatus, but which does not cause the anesthesia;" the other is true simulation.

True hysterical deafness may be temporary, may come and go with almost lightning-like rapidity, or it may be continuous.

We now come to the consideration of secretory disturbances. Of these the author is inclined to think that only one, viz., *hydrorrhea nasalis*, is possibly of hysterical origin. In these cases an enormous quantity of fluid may be excreted—several litres a day. The treatment is unsatisfactory.

Vaso-motor neuroses comes next. They may appear as angio-paralytic or as vaso-constrictor affections. To the first class belong those hyperemic and infiltrated conditions of the skin, nose, eyelids and sometimes the cheeks. This condition may also obtain in the mucous membrane of the throat and larynx. One of the most troublesome affections of this sort, is the swelling of the cavernous structures of the turbinal bodies. This condition may lead to serious general debility in hysterical patients and to secretory reflexes of the mucous membranes and the lachrymal glands.

Among the vaso-motor disturbances are to be considered those hemorrhages which are described as periodical or vicarious. The whole subject is little understood, but it is known that, in many hysterical cases, the hemorrhage is not vicarious, and, indeed, may be brought on at a given time by suggestion.

Another form of hysterical disturbance is the production of vertigo by irritation of the membranes, particularly of the ear. Hardened serumen, instrumentation (catheterism, etc.) may produce it. Here also should be mentioned the various degrees and forms of phonophobia, fear of sound. The most active hysterical seizures

may result from noises. Another curiosity is the *audation colorée* where the patient, upon hearing certain tones or notes, will at the same time have the impression of a certain color. Here, too, may be mentioned the cases of laryngeal vertigo (Charcot). This condition is not clearly understood and its study is rendered still more difficult by reason of its resemblance to syncope, laryngea and the laryngeal crises of tubes.

We now come to the consideration of motor hysterical disturbances. The aural muscles may be the seat of almost continuous action. A convulsive tick affecting the muscles of the face is common. Convulsive action of the tubal muscles may under favorable circumstances be seen by posterior rhinoscopy. The mouth of the tube is expanded and then closed with the result of producing a snapping or ticking noise in the ear. It may, however, produce merely a roaring or buzzing sound. This condition is most apt to be present where other abnormal conditions of the pharynx or nasopharynx prevail. Hysteria may affect all of the respiratory muscles, or any one of them. The *alæ nasi* are frequently the seat of irregular convulsive movements. Attacks of hysterical sneezing and coughing are common. Several forms of this purely nervous cough are described, and the treatment recommended is a sort of pulmonary gymnastics. This consists of deep-drawn breaths which are held in the chest for a certain time.

Nervous asthma next claims our attention. Of course, it is very difficult to say when a case of asthma is purely nervous, yet there are many cases presenting some slight substratum of physical change, which are nevertheless largely nervous in their origin. Another reflex neurosis is a sudden contraction of all the respiratory muscles—*singultus*. In these asthmatic cases the practitioner is warned to abstain from any long-continued series of cauterizations or any other irritating treatment. The result of such measures being frequently to leave the patient in a worse condition than before, so far as the asthma is concerned.

Hysterical spasm of the larynx is one of the gravest affections with which we have to deal. It sometimes ends in death and is always distressing. It will be present at intervals for years. Observations are also on record which tend to show the existence of a tracheal spasm. Here the smooth muscular fibres of the posterior tracheal wall are thrown into activity, and by their contraction form a ridge along the interior of the trachea, which produces dyspnea.

The author next considers those motor disturbances which affect phonation. First, spastic dysphonia, which consists of a spasmodic

contraction of the laryngeal muscles just as the patient is about to speak. This may occur in all degrees of severity, from a mere disturbance in speaking up to spastic aphonia.

The spasm may so completely close the glottis that not only phonation but respiration also is interfered with: requiring the use of chloroform, ether or cocaine to relax the muscles. Where these do not effect a cure, tracheotomy must be resorted to. Michael has given us a means whereby this spastic aphonia may at once be distinguished from anterior paresis. This is the application of upward pressure to the cricoid. Inasmuch as this pressure effects the movement which would be accomplished by the anterior muscles, the phonation is improved if they are at fault: whereas in spastic aphonia such pressure only increases the trouble.

Another form of hysterical motor disturbance is the swallowing of air. The patient feels a constant inclination to swallow. This being yielded to, the stomach soon becomes inflated with air. The patient in many instances is able to throw this off and the whole performance commences anew.

The last subject taken up by the author is that form of motor disturbance affecting the voice. Before entering upon the consideration of aphonia he draws attention to a form of paresis of the soft palate which has never been described. It occurs in nervous children and generally follows removal of adenoids. Some time after the operation (four to six weeks) the child is brought back with the statement that he speaks through the nose worse than ever. A careful examination shows that the passages are perfectly free, and yet the nasal voice is certainly present, although it may be intermittent, the child at times speaking in a perfectly free and clear voice. Flatau says that at first he was inclined to think that this paresis was due to some injury received during the operation. He, however, noticed that this condition appeared in children who had shown other evidence of nervous irritability. He therefore abandoned all treatment except a sort of vocal gymnastics, and generally thereby effected a cure, although slowly.

Hysterical aphonia may exhibit many different phases. One patient may simply lose the power of speaking aloud, but may still be able to whisper: another will be unable to make the slightest sound—hysterical mutism. All the laryngeal muscles may be affected or only a single pair. Among the causes may be mentioned sudden emotional disturbances. Local diseases also may bring on an attack of this sort, where no such effect would be produced if the patient were not of an hysterical temperament. Hysterical mutism

is to be regarded as a grave affection, for it may persist for weeks and months. This absolute idleness of the muscles of phonation may result in nutritional changes which render abortive all attempts at restoring their functional activity. The author recommends in these cases a system of proper breathing, with efforts at accomplishing phonation. Many cases have been cured simply by using the laryngeal mirror, particularly if this manipulation is new to them. The use of "apparent cauterization" is again recommended in these cases. In old cases, irritation by the probe and the electric current is advised.

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OBITUARY.

It is with profound regret that we chronicle the demise of the distinguished laryngologist, Prof. Karl Stoerck, of Vienna. He was a progressive and enthusiastic worker in the laryngological field, a man of many resources and practical ideas.

He was active in laryngology when this branch of medicine was in its earliest stages of development, and contributed much to the rapid growth of this specialty for the past three decades. In his early work he was associated with Türck, and as early as 1860 he published his demonstrations and observations upon the then imperfectly explored field of rhinology. According to Mackenzie, the first attempts to overcome the difficulties of the examination of the esophagus during life were made by Semeleder and Stoerck in 1866. His name will be ever associated with this pioneer work of investigation and examination of the esophagus.

Prof. Stoerck graduated in 1858, and one year later was made assistant physician to the General Hospital of Vienna. In 1875 he was made Extraordinary Professor of Laryngology, and 1894 succeeded Prof. Schroetter as Ordinary Professor of Laryngology in the University of Vienna.



PROFESSOR KARL STOERCK.

Among his more important writings may be mentioned, "A Work on Laryngology," 1872; "Klinik der Krankheiten des Kehlkopfes, der Nase, und des Rachens," 1876; "Klinik der Kehlkopfkrankheiten," 1889, and "Diseases of the Nose, Pharynx and Larynx," which appeared as part of the Nothnagel Series on Medicine.

Of a practical and mechanical turn of mind, he devised many new instruments and modifications for the armamentarium of the laryngologist. He was a man of much personal magnetism, an excellent clinical teacher and one of the most brilliant and skillful operators.

G.

SOCIETY PROCEEDINGS.

BRITISH MEDICAL ASSOCIATION.

SECTION OF LARYNGOLOGY AND OTOTOLOGY.

Continued from Page 255.

The Diagnosis and Treatment of Chronic Frontal Empyema.

GENERAL DISCUSSION.

ERNEST WAGGETT (London) summarized his views as follows:

1. Acute frontal empyema nearly always ends in spontaneous recovery.

2. After a general involvement of the accessory sinuses, the frontal sinus is the first to recover.

3. The normal ostium is admirably situated for the purposes of drainage.

4. Consequently the mere fact that a frontal empyema is chronic affords presumptive evidence that either the ostium is abnormal and inefficient as a drain, or that some serious lesion (caries, polypus, etc.) exists in the sinus, incurable by mere irrigation. Thus chronicity necessitates a cutting operation.

5. Inasmuch as the external operation is safer, easier, and more effectual than any operation performed through the nose, it is desirable that all chronic frontal empyemas should be treated by external operation.

SARGENT SNOW (Syracuse, N. Y.) said he desired to emphasize the importance of intranasal drainage. He had found it easy in several cases to lay the anterior superior ethmoidal cells and the frontal sinus into one cavity, operating through the nose, and using cutting forceps and a curette. From personal experience, he had great and growing confidence in this method. To prevent the recurrence of polypoid overgrowths of the mucosa 5 per cent chromic acid applied on cotton-wool was an excellent application. He recommended the intranasal route for the majority of cases.

W. J. NOURSE (London) remarked that the external operation was not devoid of danger. He thought a cannula could generally be introduced from the nose, provided it were bent almost to a right angle. In one case he had successfully introduced a drainage-tube through the nose, and it caused in a few days dilation of the canal.

MAYO COLLIER (London) said Mr. Symonds had omitted the latent forms first described by Ogston. He thought they were the parent of all the other forms. Chronic headache was the principal symptom, worse at night or on stooping, with tenderness on percussing the frontal region.

The objects of treatment were to establish free communication with the nose and deal with the diseased mucous membrane. He strongly advocated external operation through a median incision in all cases.

BRYAN (Washington) thought the fronto-ethmoidal cells were affected in all bad cases, and were the source of the trouble. He preferred the Ogston-Luc operation. He had abandoned tubes and used gauze packing, drawing it out through the nose and closing the external wound. Intranasal treatment was insufficient where there was caries.

DUNDAS GRANT (London) pointed out that frontal pain might be present in all the forms of empyema; hence, as a diagnostic sign it was of little value. On the other hand, the absence of such pain was of considerable importance as a negative sign.

The speaker approved strongly of experimental irrigation through the infundibulum; he used Hartmann's canula, and found that it could be introduced in about 50 per cent of all cases. It must be remembered that in the frontal sinus there was a considerable tendency to spontaneous recovery. He thought some cases recovered after discharging into the antrum, and that this might account for some of the remarkable recoveries recorded in antrum cases.

Retention of secretion might be due to tortuosity of the fronto-nasal duct, which was not removable; but it might also be due to enlargement of the anterior part of the middle turbinated body, which was removable. He considered that resection of the anterior part of the middle turbinated body was very important as a measure of treatment; in one case which he had seen that procedure seemed to have a great deal to do with the recovery, after the external operation had failed.

Rapid recovery must not be expected, and the discharge might even be increased for the first few days, or even for a week after access had been obtained to the sinus.

He had found a very strong objection amongst patients to the external operation, and he felt sure that the more we persevered with intranasal methods—hoping and meaning to succeed—the greater would be the measure of our success. If the infundibulum were curetted at all, a very free opening should be made, as otherwise adhesions might form and cause obstruction.

In doing the external operation, he had found that one had a tendency to make the incision too low, so that it was not entirely covered by the eyebrow. Asymmetry of the sinus must be taken into account; in one case he had opened the left sinus when he meant to open the right. In conclusion, the speaker insisted upon the view that intranasal methods ought to be exhausted before any external operation was proposed.

WILLIAM HILL (London) thought when the frontal sinus was known to be diseased it ought to be opened. It was an exploration, not a serious operation. Probably the very serious cases which we had heard described were cases of ethmoidal and sphenoidal, as well as frontal, disease. Relapse was often due to the co-existence of ethmoidal disease. He deprecated the performance of such extensive operations as Dr. Röpke's. He used no drainage-tube nor any substitute, and considered them evils to be avoided whenever possible.

HERBERT TILLEY (London) thought it quite open to argument whether some of the milder cases were not better left alone without an external operation.

In cases where there was much discharge of pus, associated with polypi and granulations in the middle meatus, he thought it wise to advise the radical operation; in such cases the ethmoidal cells and maxillary antrum were often involved in the suppurative condition, associated with polypoid degeneration of the mucous membrane. The radical operation tended to cure these conditions, and to prevent the serious complications which sometimes ensued, such as cerebral abscess, meningitis, necrosis of bone, and ocular disturbances, including orbital abscess.

Unilateral discharge of pus from the middle meatus, with possibly supra-orbital headache, should always be deemed due to maxillary antral suppuration, unless transillumination or intranasal puncture by Lichtwitz's trocar proved the cavity was free from pus. If this was the case, then we know that we have to deal with the frontal sinus or the ethmoidal cells. The next proceeding should be to remove under cocaine the anterior half of the middle turbinated bone, in order to obtain a good view of the hiatus semilunaris, and to allow a freer drainage from the frontal sinus, as well as rendering the fronto-nasal passage more accessible to a probe or fine catheter, at the same time enabling us to curette away granulations or small polypi from the neighborhood of the anterior ethmoidal cells.

Cleansing nasal douches should be then used for a week or ten days, and then the external radical operation proceeded with. In connection with this Dr. Tilley advised:

1. That the skin incision should be under the inner third of the line of the eyebrow, and carried downwards to just above the internal palpebral ligament. Before commencing the operation the post-nasal space should be tightly plugged with a sponge.
2. That the anterior wall of the sinus should be freely removed, so that the soft parts may afterwards fall in well and tend to occlude the cavity.
3. That an opening large enough to admit the tip of the index finger should be made into the nose, so that it cannot become occluded by granulations.
4. The sinus should be well curetted, its diverticula, if any, followed up and cleansed out, and the whole sinus swabbed out with a strong antiseptic solution, such as zinc chloride, 40 grains to the ounce.
5. The external wound should be closed at once and pressure, by means of an antiseptic dressing, applied. Personally, he preferred a simple drain-tube extending from the lower part of the sinus to the external nars; it should be kept in from five to six days, as it will tend to prevent the formation of granulation tissue in the fronto-nasal passage. On removal it is quite easy to see into the sinus by anterior rhinoscopy, and to syringe it out through a suitable catheter.

In cases where both sinuses are involved, Dr. Tilley thought that from an esthetic point of view it is much wiser to perform two separate operations, one under each eyebrow, because when healed the small scar under the eyebrow is scarcely noticeable; if, however, these are joined across the root of the nose, the scar is always well marked and noticeable.

If both frontal and maxillary sinuses are involved, he preferred operating on the frontal sinus first, and in this differed from Dr. Moure. The frontal sinus is the higher, and the antrum is often acting merely as a reservoir for the pus coming down from above. He would always, however, at the time of opening the frontal sinus place a temporary alveolar drain in the maxillary antrum, so as to prevent undue accumulation of pus there.

By proceeding *vice versa* the antrum may become reinfected by discharge coming from the frontal sinus, as has happened in a case recently under his care. Diagrams were shown indicating the intimate relation between the frontal sinus and antrum.

In a large straggling sinus with many diverticula it may be necessary to remove the whole anterior bony wall, so that the external skin-flaps will ultimately become adherent to what was originally

the posterior wall of the sinus. In these large sinuses the incision under the eyebrow may not be sufficient, and a median verticle one has to be added in order to deal efficiently with the sinus cavity.

SCANES SPICER (London) said he would operate from the outside, but would deal with the nose first. Many cases recovered after breaking away the ethmoidal cells, and it was often difficult to say with certainty that the frontal sinus was diseased. In operating, he did all the sinuses at once if possible.

KNAPP (New York) had experience almost exclusively of ophthalmic cases, and in such cases he considered the radical operation the only satisfactory one. He operated by a method somewhat similar to Röpke's, removing the whole anterior wall, but leaving the upper orbital margin, which prevented deformity. He hoped in the future to be able to dispense with drainage-tubes and their substitutes.

RUDLOFF (Wiesbaden) related the history of a fatal case of frontal empyema that occurred in his practice. A patient, aged forty, who had suffered for over twenty years from nasal polypi, came under his care. He found her to be suffering from multiple empyemata involving both antra, both sphenoidal sinuses, and probably both frontal sinuses. Polypi were present, and there was some sphenoidal caries.

The maxillary antra were first operated upon, next the sphenoidal sinuses, and then (the diagnosis being now certain) the left frontal sinus was opened from the outside, the infundibulum enlarged, and the cavity packed with gauze. The operation was apparently successful, but the wound never looked well, and a few weeks later caries of the posterior wall of the sinus was found. A second operation was performed, the whole of the diseased posterior wall was removed, and at the same time the right sinus was operated upon. Some days afterwards symptoms of extradural abscess showed themselves. An effort was made to check the infective process by removing all the infiltrated part of the frontal bone; but the temperature again rose, aphasia developed, followed by facial paralysis, and Dr. Rudloff concluded that there was suppuration, involving more or less directly the third left frontal convolution. He accordingly trephined, and on incising the bulging dura a considerable quantity of pus escaped from the subdural space. The patient died on the second day.

Post-mortem.—Purulent leptomeningitis over the left hemisphere, ulceration of third frontal convolution and its vicinity. Maxillary antra healed; sphenoidal sinuses healing.

A bacteriological examination was made by Dr. Bartholdy, and revealed the presence of (1) *Micrococcus roseus* (Eisenberg) and (2) *Bacillus mesentericus vulgatus*. This mixed infection explains the intractable nature of the case.

LOGAN TURNER (Edinburg) drew the attention of the meeting to the use of transillumination in the diagnosis of chronic empyema of the frontal sinus. The question of its value was a vexed one. Dr. Moure in his remarks had laid some stress on the value of its use in diagnosis, and in a recent paper by Drs. Lubet-Barbon and Furet of Paris, the existence of opacity on the suspected side was considered by these authors to be of some importance. He (Dr. Turner) had devoted a considerable amount of attention to this subject, and while carrying out an investigation into the possible racial characteristics of the frontal sinuses, he had noted certain important clinical points. Five hundred skulls had been examined, and of these 357, or 71 per cent, had both frontal sinuses present; 80 skulls, or 16 per cent, had both sinuses absent; 63 skulls, or 12.5 per cent, had one sinus absent, the right in 45 skulls, the left in 18 skulls. All these skulls (500) were illuminated, the lamp being placed first under one supra-orbital margin and then under the other, the illuminated areas when present being mapped out in ink upon the frontal bone. The following facts were ascertained: In no skull where a sinus was absent was the frontal area illuminated. Of the 357 skulls in which both sinuses were present, 98 failed to be illuminated on both sides, 50 failed to be illuminated on one side. Of the 63 skulls in which one sinus was absent, 40 illuminated on the opposite or sinus side, while 23 were negative to illumination on the opposite side. In a number of skulls also, where both sinuses illuminated, variation in the intensity of the illumination on the two sides was noted. With these anatomical facts under consideration, the value of transillumination as a diagnostic aid in frontal sinus empyema was very considerably weakened; opacity did not mean necessarily the presence of pus. Again, Dr. Turner had found the frontal sinus illuminated well and accurately in more than one case in which on the following day pus under tension and polypi were found at the operation.

In considering the question of operative interference, on the other hand, the surgeon would undoubtedly find a preliminary illumination of the suspected sinus of value. If a suspected sinus could be thus mapped out, its dimensions could be ascertained and the position of the intervening septum located. The operator might thus be in a position to recognize beforehand the symmetry or asymmetry of the sinuses and the position of the septum.

Dr. Turner illustrated, by means of photographs of skulls in which the sinuses had been illuminated and mapped out, variations in the size of the sinuses and certain oblique positions of the septum.

P. J. MIXK (Zwolle, Holland) demonstrated his apparatus for auscultating the frontal sinus. A bent vulcanite cannula is passed into the hiatus semilunaris; through this, from a Politzer's bag, air is blown up the infundibulum into the sinus, where, if pus or mucus be present, crepitations are produced. One end of an auscultating-tube is fixed by a spring over the sinus, whilst the other end is inserted into the ear of the observer, who is thus enabled to hear the crepitation if liquid be present.

STCLAIR THOMSON (London) submitted two questions: Was transillumination of any value in the living subject? and, secondly, What was meant by "free curetting"? He judged it sufficient to remove simply the redundant polypoid degeneration and thought that to attempt more was dangerous and might account for some unfavorable results.

CRESSWELL BABER (London) expressed the pleasure it had given him to preside. The fatal cases showed the importance of early operation, and he agreed with Mr. Waggett as to the external route being the best as soon as the diagnosis was certain; but early diagnosis was often difficult when the discharge was slight. Tenderness was a fallacious sign, and mislead him upon one occasion, into opening a healthy sinus. He had not found transillumination reliable. Kuhnt's operation was sometimes very satisfactory and left little deformity.

CHARTERS SYMONDS replied. He thought there was general agreement upon certain points:

1. External operation was necessary in bad cases.
2. Attempts to break into the sinus from the nose were very dangerous.
3. Removal of the anterior part of the middle turbinated body was generally very useful.

There was a considerable balance of opinion in favor of intranasal methods, and these might suffice for simple cases, no force being used. He agreed with Dr. StClair Thomson as regards the meaning of "free curetting;" he never attempted to remove all the mucous membrane.

A Case of Cerebellar Abscess secondary to Chronic Suppurative Otitis Media; Evacuation; Recovery—ERNEST WAGGETT.

The patient, a man of twenty-six, presented himself with chronic otorrhea on the right side, and complaining of pain and giddiness, the latter symptom being new to him, and of three weeks' duration. A large polyp springing from the region of the aditus was removed. Three weeks later the symptoms returned, and foul pus was found pent up behind a plug of wool introduced by the patient.

Right facial palsy suddenly developed, involving all branches of the nerve. Schwartze-Stacke's operation was performed, with relief of pain. No vertigo was experienced as he lay in bed, and the operation cavity was in every respect satisfactory. Nevertheless, the general health declined, and the patient felt "liverish" and devoid of appetite. Bowels constipated and breath foul. The optic discs had throughout been pink and ill-defined. Nineteen days after the operation he was complaining that rapid movements of the head caused vertigo, which once or twice was followed by nausea and vomiting.

Neuralgic pain was experienced in the occipital region, left side, shifting later to the right. Sluggish reaction of the somewhat dilated right pupil. The temperature, which rose to 100.5° on the tenth day, had for two days remained a degree below normal. The pulse-rate had fallen from 80 to between 60 and 65. The patient had gradually become extremely ill and weak. Staggering gait, but no evidence of forced movements; slight ataxia of the right arm. Exaggerated knee-jerks. Patient always lay on the left side.

On the twenty-first day, the symptoms being more pronounced, and intracranial and probably cerebellar abscess being diagnosed, the brain was explored.

Dean's operation was performed, a $\frac{2}{5}$ -inch trephine being applied over the lateral sinus, one inch and a quarter behind the center of the meatus and a quarter of an inch above it. The vessel, accidentally punctured, proved to be perfectly healthy. The meninges bulged in both posterior and middle fossæ, and pulsation was absent in both situations. The cerebellum was explored with Horsley's pus-seeker in ten directions, the penetration being carried to the extreme limits, but no pus found. Exploration of the tempo-sphenoidal lobe was also fruitless.

Five days later the patient appeared to be dying. The left optic disc was choked and swollen. The knee-jerks, previously exaggerated, were now completely absent. Temperature, 96° ; pulse, 54. Both cerebrum and cerebellum pulseless, but the latter only was bulging into the wound.

After a fruitless exploration of the cerebellum with the pus-seeker, the left index-finger was introduced, and the posterior aspect of the petrous bone felt. On a second introduction to the depth of $3\frac{1}{4}$ inches in the direction of the apex of the petrous, an elastic rounded body was felt between the finger and the tentorium. The pus-seeker, which on previous occasions must have displaced this body, was made to penetrate. About an ounce and a half of foul green pus came away. The pulse-rate immediately increased in frequency. During the introduction of two decalcified bone tubes a drachm or more of clear amber-colored fluid came away.

During the following eight hours the temperature rose from 96° to 100° , and the mental state changed from one of torpor to one of irritation. Lateral nystagmus slow to the left, with rapid return to the right. Patient complained of severe pain all down the back, and this symptom seemed very serious, viewed in conjunction with the escape of cerebro-spinal fluid mentioned above. On gently syringing the abscess cavity, slight vertigo and a humming tinnitus was experienced.

On the third day the patient was much better, the main symptom being great weakness, met by free use of brandy; constipation; no vomiting or vertigo. The right external rectus oculi found to be paralyzed. Nystagmus no longer constant on the fourth day, and the swelling of the left disc had completely subsided. Patient began to lie on the right side occasionally.

At the end of ten days he was in a fair way to recovery, and during the third week exhibited the voracious appetite noted by other writers, being reported by the nurses to be "eating seven dinners a day." No large amount of pus was ever secreted by the abscess cavity, but drainage was maintained for a month. The bone tubes required renewal several times, as they became absorbed and softened. They were finally removed a month after operation, and the wound closed by a plastic operation. The patient had by this time been walking about for some days without any vertigo. His general health is now excellent, and he is engaged at his trade of harness-making. When fatigued he notices slight diplopia, due to paresis of the right external rectus, also slight dimness of vision. The knee-jerks did not return for two months, that on the right side being very slight at the third month. The grip of the right hand was weaker than the left a month after operation, but was equal to the left during the critical stages of the case. The facial palsy persists.

This appears to be the thirteenth successful case reported. Secher Walker, of Leeds, and Bechmann, of Berlin, have each reported a case since the paper of Acland and Ballance, which included ten cases, was written.

The Local Use of Formalin in the Treatment of Atrophic Rhinitis (often called Ozena)—ADOLPH BRONNER (Bradford).

The author said, in late years much had been written on the pathology and treatment of atrophic rhinitis. He did not intend to enter into any controversy on these points, and only wished to report on a new remedy which in his hands had proved most useful in these cases. He referred to the so-called atrophic (or dry) non-fetid and to atrophic (or dry) fetid rhinitis, often called ozena.

The first indication in the treatment of atrophic rhinitis was to thoroughly cleanse the cavities and remove the inspissated mucus and crusts. The second indication was to alter the nature of the secretion of the mucous membrane, and thus prevent the formation of the crusts.

He generally ordered an alkaline lotion for removing the crusts, to be used with a Higginson's enema syringe, and with as much force as possible without causing serious discomfort. If there were any patches of hypertrophy of the mucous membrane, he removed them with the galvano-cautery or trichloracetic acid.

Innumerable sprays and insufflations had been recommended in the treatment of atrophic rhinitis. He had for some time used formol or formalin. In bad cases he prescribed a 1 in 1,000 to 1 in 2,000 solution of the liquid formalin with water, to be used with a small nasal syringe; or a 1 in 500 to 1 in 1,000 solution, with a little glycerine added, to be used with a coarse spray three or four times a day for a few days, and then two or three days in the week for a few weeks or months. If the application was painful, the solution should be diluted with water. Formalin had a most powerful effect on the glandular tissues—how, he did not know, but he believed that it acted directly on the cells of the glands. It was therefore very important that the solution should not be too strong, or used for a very lengthy period of time.

Formalin had also a powerful deodorizing action. In cases of fetid atrophic rhinitis—or, as some call it, ozena—it was most useful in removing the most disagreeable and penetrating smell. If it only did this, and nothing else, it would be a boon to many a poor wretch.

In many cases of atrophic rhinitis the accessory nasal cavities were affected, particularly the maxillary antrum. Until these had been treated and cured, any local treatment of the nares must necessarily be futile. In his small experience the maxillary antrum or antra were affected in about 25 or 30 per cent of all cases of ozena.

In the after-treatment of atrophic rhinitis he had recently tried insufflations of tannoform (a combination of tannin and formalin) with boric acid, and found it most useful.

In conclusion, he wished once more to state that atrophic rhinitis, fetid or non-fetid, has nothing whatever to do with syphilis; also to protest against the so-called surgical treatment of ozena. The exact nature of this treatment was a mystery. The patient is admitted into a private hospital, put under an anesthetic, and then anything and everything in the nose which can be removed is pulled out with large forceps.

He had during the last few months seen no less than four patients who had at various times been subjected to this so-called surgical treatment, and not only once, but three times, and one poor wretch four times.

JOBSON HORNE (London) spoke in favor of formalin as an antiseptic in diseases of the throat, nose and ear. He more particularly referred to its value during the convalescent stage of infectious diseases of the nose and throat, such as diphtheria, when it is important to prevent the patient from being a source of infection to others, and in this respect he thought that formalin would be found to be a more efficient and suitable antiseptic than perchloride of mercury.

T. BOBONE (San Remo) said his patients had objected to formalin on account of the pain it occasioned, and advocated the use of nitrate of silver and iodide of potassium in the form of a paste.

WATSON WILLIAMS (Bristol) remarked that he had used weak formalin solution, but that his experience with it had not altogether fulfilled his expectations. It certainly removed the fetor, and often rendered the mucous membrane less dry for a time; but its use had caused pain in his cases, and he thought that unless the irritation the produced amounted to considerable discomfort, the effects were very transitory. He had come to the conclusion that equally beneficial results were obtainable by freely washing out the cavities with alkaline solutions containing some carbolic acid or non-irritating antiseptic. He had not observed any frequent association of true ozena with antral disease.

HERBERT TILLEY (London) emphasized the importance of thorough and efficient douching with an antiseptic alkaline wash, and said that most failures in cases where this was prescribed was due to the patients not knowing *how* to use their douche.

JACKSON (Pittsburg) PEGLER (London), and W. LAMB (Birmingham) also joined in the discussion.

The author, in reply, stated that small quantities of Formalin used in a spray, gradually increased in strength, for a few weeks at a time, would not occasion pain. Douching he considered unnecessary, and best avoided.

Laryngitis Secondary to Nasal Disease—DUNDAS GRANT.

Without for a moment refusing to the larynx the right of being primarily affected on its own account, there is little doubt that in a very large number of cases—in my experience a considerable majority—the laryngeal trouble is associated with, or even caused by, some form of nasal disease. There are several ways in which nasal disease may induce inflammatory changes in the larynx.

Nasal obstruction as such may oblige the patient to breathe through his mouth, and consequently to inhale air unwarmed, unmoistened and unfiltered. In this way the production of the slighter forms of laryngitis is readily intelligible, and it is sufficient to induce hoarseness and vocal disability, especially if the voice be subjected to an amount of use or wrong use, which under other circumstances would be innocuous.

In ozena—or, to be more exact, chronic fetid atrophic rhinitis—the larynx is notoriously apt to be affected, so that a condition described as ozena laryngis is produced. Whether from an extension downwards *per continuitatem*, or from the inhalation of crusts and discharges, the surface of the laryngeal mucous membrane becomes altered, and as a rule thickened. It looks sticky rather than moist, and it is here and there beset with adherent flakes of dirty yellowish muco-pus in varying stages of dryness. These occasionally become suddenly impacted between the vocal cords, and the voice, habitually hoarse, becomes for the moment extinct. The pharynx is dry and glazed, the breath offensive.

In chronic suppurative inflammation of the nasal sinuses, more particularly the sphenoidal and posterior ethmoidal, the most usual complaint is of a dryness in the throat, with hoarseness or loss of voice. This is due to the laryngitis produced by the inhalation of infective muco-pus. The laryngeal appearance is that of a somewhat macerated mucous membrane; the epiglottis is comparatively unaffected; the ary-epiglottis folds lose their smoothness, and are bathed in a sticky muco-pus, which extends over the ventricular bands and particularly the interarytenoid mucous membrane. The latter swells up into the form of a beefy cushion; the vocal cords lose their polish, and acquire a red, swollen appearance, like raw beef.

These well-marked forms can scarcely escape recognition, but in simple chronic rhinitis of the moist variety the larynx becomes affected in a very characteristic manner. As the result of maceration by non-infective nasal secretion, the mucous membrane in the most exposed parts acquire a swollen and pale, as if “sodden,” appearance, suggestive of the skin of a washerwoman’s hand. This is

particularly the case in the interarytenoid fold. The cords also lose their luster and the fineness of their edges, acquiring a sort of cloudy, swollen character, as if, as I believe there is, there were a proliferation of the superficial epithelium.

Many users of the laryngoscope must have been perplexed by these bizarre appearances, as of laryngitis "gone wrong," until they traced them to their origin as results of various forms of rhinitis. Very often from the mere appearance of the larynx one is able to state with confidence that there is present some form of rhinitis, and even its nature, before extending one's investigation to the nasal cavities.

As I have already stated, I believe there is in the cases I am describing a proliferation of the superficial epithelium, although for the present I can produce no microscopic evidence to confirm a view which will, I believe, be readily accepted. The source of irritation being from the outside of the mucous membrane, the surface would be naturally the part first affected. In this respect, then, it differs from those diathetic forms of laryngitis and from those occasioned by misuse of the voice, in which vascular and inflammatory changes take place primarily in the submucous tissues.

The *diagnosis* is not, as a rule, difficult, if the nature of the cause be kept before the mind, and the appearance of the changes induced by maceration be realized.

In some cases rhinitis laryngitis may simulate *tuberculosis of the larynx*, especially when the irritation set up by a purulent discharge has led to swelling of the ary-epiglottic folds. There is, however, absence of involvement of the epiglottis; there is less translucency than is seen in the earlier steps of tubercular infiltration; there is little or no pain in swallowing, but there may be cough, disturbance of digestion, and even considerable deterioration of the general condition. The case is usually cleared up by the discovery of the rhinitic cause and by the remarkable improvement which takes place under treatment, if this includes the cleansing of the nasal passages.

The forms arising from chronic atrophic rhinitis may be taken for *sypilis*, especially when the swelling in the arytenoid space is considerable, and is covered by an adherent greenish crust. The foreshortened view then obtained is very much that of a gumma. It is distinguished therefrom by the easy clearance of the crust by coughing, after the use of a soda spray or by brushing, as also by the effect of nasal medication. It is to be remembered that tertiary syphilitic disease in the nose may produce, as the result of inhalation of pus, a non-specific laryngitis.

From the description above given it may seem that the condition may greatly resemble some of the forms of *pachydermia laryngis*. In my opinion they *are* forms of pachydermia, or, in other words, many cases of the less typical pachydermia of the larynx are really the superficial laryngitis which results from nasal suppuration.

Scleroma of the larynx is another condition which it may simulate, but this is usually accompanied by characteristic changes in the nose.

The *treatment* follows from the diagnosis, and takes two directions. I need hardly say that first and foremost the source of irritation must be removed by treatment of the nose. Thus, in congestion from simple nasal obstruction we may have to use an alkaline spray or wash, pin down the turgescient inferior turbinated body by the galvano-cautery or some equivalent, remove occluding septal out-growths or portions of the turbinated bodies. In cases of ozena free irrigation and the application of some stimulating and antiseptic spray, as a 5 to 10 per cent solution of chloride of zinc, give the best results I have yet seen. Empyema of the various sinuses calls for the appropriate treatment, which cannot here receive detailed description.

As regards local laryngeal treatment, much depends on the nature of the condition.

In the chronic congestive conditions the local application of astringents (preferably the 10 per cent solution of chloride of zinc in rose-water) by means of a brush or spray is desirable. A temporary anemia is produced by means of a spray of cocaine (10 per cent), which may be prolonged by the subsequent use of antipyrin; or the antipyrin may be preceded by eucain, instead of cocain, to avoid toxic effects. Errors in voice-production and respiration should be corrected. The voice should as a rule be kept at rest, but I believe that the decongestionizing is favored by the cautious use of the "pmawing" exercises devised by Curtis.

Where the mucous membrane is simply sodden, rapid subsidence takes place when the nasal condition is removed, and such an astringent as chloride of zinc is applied. If, however, the white swelling of the mucous surface indicates proliferation of the epithelium, there is a local remedy of the greatest value, namely, salicylic acid. This may be used in strengths increasing from 1 to 5 per cent in such a form as follows:

Salicylic acid	5 to 25 grains.
Rectified spirits.....	5 drachms.
Glycerine.....	3 drachms.

The throat should be anesthetized by means of cocaine or eucaine—at all events, for the first few times—and the application should be made by means of a very small pledget of wool securely twisted on a Smyly's laryngeal wool-holder. It should be confined as much as possible to the affected part, which it rapidly blanches, leaving the normal mucous membrane very slightly whitened—at all events, when the weaker solutions are employed. This remedy is to be used with precaution, as it is necessarily irritating. It may be taken, as a rule, that the greater amount of epithelial proliferation, the greater is the indication for the use of salicylic acid, the better it is borne, the greater should be the strength and frequency of the application. When the epithelial thickening is removed, the acid is apt to produce a rawness, or even an erosion, of the surface, which, however, soon subsides when its use is discontinued. In cases in which there is no epithelial hyperplasia, this same untoward result is apt to ensue, and the remedy is contra-indicated.

In cases of epithelial hyperplasia in the interarytenoid space, the remedy is peculiarly indicated, and most easy to apply.

For those who have employed salicylic acid or the so-called "cannabine" in the treatment of corns, this use of the remedy will seem most natural, and they will be only surprised that it should be so little in vogue. I have tried this salicylic acid treatment in the case of recurrent papillomata of the larynx with definitely good results, such as have been recorded of its use on warts on the surface of the body.

Case of Rhinitis Laryngitis treated by Means of Salicylic Acid.

Miss B. came under my care in October, 1896, complaining of pain in the throat after the slightest use of the voice, and also during swallowing. Her trouble was of two months' duration, and she had been practicing singing for operatic purposes. Both vocal cords were thickened and rough, there was considerable hypertrophy of the inferior turbinates, and a small crop of adenoids in the nasopharynx.

The turbinated bodies were reduced by operation, the adenoids were removed, and a slight improvement took place, but off and on the patient has been troubled with regard to her voice, so that she has been unable to use it for vocal purposes. The irrigation of the nose was freely carried out, and various astringents have from time to time been applied to the larynx. About two months ago a solution of salicylic acid was applied for the first time. The application, it must be admitted, was followed for several hours by some discomfort in the throat, and in the evening of the same day there was rather increased difficulty in the use of the voice.

The next day the voice was clearer than it had been before while under my treatment, and it has steadily improved ever since. I believe that at times I applied the acid too frequently, but on the whole the result has been exceptionally striking.

Case of Rhinitic Pachydermoid Laryngitis treated with Salicylic Acid.

Mr. G., aged fifty-nine, music-hall attendant, came under my care, on the advice of Dr. Barragry, on account of a stuffy feeling in the throat and extreme hoarseness, which had lasted for about four months, and was getting worse rather than better. The cords were partially concealed by very swollen ventricular bands; they were obviously less tense than normal, and on their edges there was what looked like a layer of desquamating epithelium. The rest of the cords was red and succulent, and in the interarytenoid space the mucous membrane was swollen and sodden-looking. The nasal mucous membrane was in general hypertrophied, and there was considerable excess of mucous secretion.

The patient was advised to give up all alcoholic drinks (in which he usually indulged somewhat freely), and once a week, in gradually increasing strength, an alcoholic solution of salicylic acid (15 grains to the ounce) was applied to the thickening in the larynx. After two applications at intervals of a week, the voice was practically clear. At the same time he was ordered an alkaline lotion to wash out his nose, and though the swelling has not altogether disappeared, the whitish thickening on the edges of the cords is no longer perceptible.

A Case of Exophthalmic Goitre in which Operation had resulted in a Cure—RICHARD LAKE and J. POLLARD.

The authors briefly stated the conditions that influence the choice of operation in the various cases of this disease.

Their case was that of a lady of thirty-two years of age who had suffered with Graves' disease for six years. The prominent symptoms were exophthalmos, tachycardia, fainting fits, intense nervousness and great thyroid enlargement. The onset of the illness was traceable to recurrent attacks of influenza. Practically all acknowledged forms of treatment, both internal and external, including the so-called Indian treatment, were tried. None of them, however, produced any amelioration in the symptoms.

The operation was performed on May 18, 1898. The incision was about 5 inches long, extending from the angle of the jaw on the right side to the sterno-clavicular joint on the same side. The dissection was long and difficult, partly owing to the extreme vascularity

of the parts, and partly to the fact that the enlarged lobe extended beneath the sterno-mastoid muscle, the trachea and the sternum. The inferior thyroid artery was twice its usual size, and the lobe after removal measured $4\frac{1}{2}$ by $3\frac{1}{2}$ inches.

The patient showed no bad symptoms from the anesthetic. During the first four days she had several attacks of cyanosis, pain on swallowing. On the second day the temperature rose to 100° , but this was the sole occasion that it was so high.

The results were, and at the present time are, most satisfactory. The intense cephalalgia present before was never noticed after the operation. The pulse, 160 before, fell in a week to 98, and is now little quicker than normal. The exophthalmos is also gone, likewise the tachycardia and faintness. Finally, the scar is only visible for about an inch at the upper part of the wound.

In the discussion which followed, WATSON WILLIAMS (Bristol) remarked he had observed in a similar case of exophthalmic goiter, that while removal of one lobe of the thyroid gland had been followed by marked amelioration of the symptoms, they had not been wholly removed, some exophthalmos, tremor and tachycardia persisting. It was well to remember that Graves' disease is essentially a disease of the nervous system, and not of the thyroid gland, although excessive gland activity (when present) aggravates the symptoms which it does not originate, just as starch or sugar in the diet of a diabetic usually aggravates the disease which these common articles of food do not cause. The occurrence of unilateral cases of Graves' disease affords proof of these views, consequently we cannot hope that mere removal of one or both lobes of the thyroid gland will completely cure the patient. While congratulating the authors on the results in this case, he desired to emphasize the desirability of treatment by rest and drugs first, reserving operative interference for those very grave cases which did not improve under other modes of treatment: firstly, because a large number of cases were amenable to treatment by drugs, and eventually recovered; secondly, operative treatment was attended with a very high mortality; and, thirdly, it did not afford a cure.

HERBERT TILLEY agreed with Dr. Watson Williams in the importance of trying medical treatment before resorting to surgical interference, which was fraught with peculiar danger in these cases. He cited a case under his care, where the patient herself had desired to have the goitre removed, but medical treatment had produced so great an amelioration of symptoms that the patient had returned to her work as a servant. Dr. Tilley asked if any present had noticed

any improvement in these cases when diseased conditions of the nose or throat had been treated. He had seen one marked case of improvement after nasal treatment, but also knew of one where all the symptoms of Graves' disease appeared on removal of nasal polypi. When one remembered that the common exciting cause of the disease was most often of nervous origin, such sequences were perhaps not surprising.

A Case of Accessory Thyroid Gland at the Base of the Tongue—
POSTHUMUS MEYJES (Amsterdam).

The following is a brief history of the case: Miss R., twenty-four years of age, had felt since her infancy, and especially since the age of puberty, a lump like a potato sticking in her throat.

She came from healthy parents, and had never been ill herself. Her only complaint was that every now and then she brought up small quantities of bloodstained phlegm, which she thought the result of clearing her throat too hard when the swelling was more than usually irritating. Her health appeared to be good, and intellectually she gave the impression of being normally developed.

On examining the throat, the author actually found the "potato" in the form of a semi-globular tumor occupying the right half of the base of the tongue, beginning behind the papillæ circumvallate, and extending about 3 centimeters downward. The surface was a little darker than the surrounding parts, and some swollen blood-vessels ran over the tumor.

On palpation the tumor appeared fixed and painless, the surface smooth and firm, without any indication of fluctuation, he estimated the horizontal diameter at 3 centimeters, the verticle at $2\frac{1}{2}$ centimeters.

As regards the nature of the tumor; the absence of fluctuation precluded a cyst, the long duration of the development a maglignant neoplasm. He could, therefore, but suppose that he had to deal with an accessory thyroid gland, accessory because the gland itself was not to be found in its normal place, although this, of course, may not be considered as an absolutely certain proof that the gland did not exist in an early phase of embryonic development.

The patient, who had a great aversion to operations, would not listen to an exploratory incision, still less to an operation, at least for the time being.

The reason why he did not strongly insist upon an exploratory incision was that the gland was contained in a rather thick capsule, and in order to reach the tissue proper a rather considerable wedge

would have to be removed, giving rise to, from his experience, copious bleeding and secondary hemorrhage, besides the whole of the tumor might be removed with the same amount of trouble. At all events, he decided to leave a small portion behind in order to prevent eventually myxedema, which would be sure to set in if, after all, the tumor should turn out to be really accessory.

In view of the development of the thyroid gland, it is very well possible that a thyroid gland grows from the tractus intestinalis on the back of the tongue.

In the *Archiv. für Laryng.*, Vol. viii. there is a paper by Baurowicz of Cracow on the presence of a thyroid gland in the trachea. He discusses, and at the same time controverts, the theory mooted by von Bruns, that the gland may have grown from a germ which got astray in the embryonic period, and developed during the age of puberty.

Basing his arguments on five analogous cases, in some of which a section was made (one of the patients dying of erysipelas *post operationem*), he arrived at the conclusion that the theory of von Ziemssen, who says that the thyroid glands found in the larynx must be considered as offshoots of the thyroid gland found in the normal place, is true, as the glands in the larynx have never been found isolated, but always connected with the mother-gland.

In a paper published on a subsequent occasion, von Bruns admits the truth of this theory, which further confirmed the opinion that the so-called accessory thyroid glands—in the larynx, at least—do not really deserve this name, but must be considered as offshoots of the mother-gland.

However, the thyroid gland having developed *in casu* on the base of the tongue, may be accessory because, in view of the anatomical relations, it would not do to assume that there is any connection whatever between this gland and the thyroid gland found under normal circumstances in the throat.

SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

(Continued from Page 242.)

On the Diagnosis of Interior Abscesses of the Mastoid and of Furunculosis of the External Auditory Meatus—LOUIS BAR, (Nice).

Otologists are agreed that they sometimes find it difficult, if not impossible, to make a diagnosis between the limiting cells of the mastoid process and furunculosis of the meatus externus. In such cases a reasonable diagnosis can only be made from deductives drawn from a perfect acquaintance with the anatomy and physiology of the region, and at the same time from the general aspect and progress of the case. The following deductions may be drawn:

1. That lymphangitis and early periauricular adenitis are the rule in all furuncular affections of the meatus; and are late and exceptional in purulent inflammations of the limiting cells. This is consequent on the difference between the lymphatic systems of the external and middle ear.
2. That primastoid edematous swelling effaces the retro-auricular depression in furunculosis, whereas in mastoiditis the retro-auricular depression persists and remains circumscribed.
3. That the pharyngeal plexus may become visible through venous stasis induced by the mastoiditis.
4. That in consequence of the different innervation of the tympanum and the meatus, spontaneous pains and sensitiveness are more acute in furunculosis; they are less marked in general in interior abscess of the mastoid.
5. That, also for neurological reasons, in interior cellulitis facial paresis is sometimes observed, an exaggeration of gustatory sensitiveness, and particular sensitiveness of the pharynx and end of the tongue.
6. That the bacterial nature of the pus is different in the two diseases.
7. That in absence of any febrile condition a continuous disproportion between the pulse and the temperature is in favor of mastoiditis.

Exostosis of the Right Auditory Meatus—RUTTEN, (Namur).

The osseous anomaly, which I have the honor to present, is in the first place remarkable for its large size. As a matter of fact, it measures fifteen millimeters in length and twelve millimeters in thickness. It filled the external meatus so completely as to prevent the introduction of the very smallest probe between the cell and the tumor. Besides, by its compression, the excrescence had destroyed the skin and caused an osteo-periotitis of the canal. This secondary suppuration, complicated by the retention of pus in the middle ear with the commencement of cerebral symptoms, compelled the patient to let himself be operated upon.

The exostosis is remarkable, in addition to its extraordinary size, for the long time it had been in the ear without causing any trouble. Its slow development had taken place unperceived. The patient was thirty-eight years of age at the date of the operation. He was a cooper by profession, had served in the army, and had never suffered from running from the ear.

Seven years before the operation he had consulted me for deafness. At that moment the exostosis already completely obstructed the meatus, and the patient was much astonished when I made him touch with his little finger a hard body which was only distant a few millimeters from the entrance to the ear. He had never suspected its presence. At that date the operation which I proposed was declined, although I pointed out the dangers of suppuration—complications which, as a matter of fact, set in seven years later. One might, therefore, safely say that the tumor had been fifteen to twenty years in developing.

The exostosis, of the consistence of ivory, is pedunculated. It is covered with a thin, transparent skin, and was implanted on the postero-superior wall, keeping the whole bony part of the canal. Under an anesthetic, it was removed with the gouge without turning down the auricle. The result of the operation was immediate restoration of hearing and cure of the otorrhea.

Dry Chronic Middle Ear Otitis—ARISTIDE MALHERBE (Paris).

The author submitted a new surgical procedure under the name "Scooping Out (the Evidement) Petro-Mastoid," having for its object the marked amelioration or radical cure of these grave troubles. Owing to thickening of the mucous membrane, new formation of connective tissue and membranous bands fixing the ossicles, all these spread into the mastoid cells, where they induce thickening and rigidity, and more or less hyperostosis of the subacute tissue.

The transmission of sound waves is affected partly through the ossicles and partly through the air. These alterations, diminishing the dimensions of the antrum and mobility of the organs, cause a marked lessening of the hearing power.

In a general way, in the majority of those affections grouped under the name dry chronic otitis, there is an obliteration of the tympano-mastoid system, with rarification of air, augmentation of the intra-tympanic pressure, and hence diminution of sound vibrations. It occurred to the essayist that, in order to re-establish the balance of intra-tympanic pressure, which is often destroyed, and to enlarge the spaces, after clearing out the bone, a communication could be established between the tympano-mastoid cavities, and the external air thus forming a veritable tubage or canilisation of the middle ear. He obtains this object by means of a small U-shaped celluloid tube the size of a No. 15 French (No. 9 English) catheter. The tube is anticepsised, and one end is placed in the antral cavity, and the convexity rests on the mastoid process. The other end, which has its convex side bevelled, enters the external auditory canal through an opening made in the posterior wall at the junction of the cartilaginous portion of the wall.

The preparatory and preliminary technique is largely that employed in the mastoid operation. After the tube is placed the auricle is replaced, and the wound closed by directly joining the auricle to the posterior edge of the incision by means of a few points of silkworm-gut suture. The dressing remains for eight days. When not advisable to employ a tube, a fine strip of sterilized gauze is put in the aditus and antrum instead. The end of this gauze likewise passes through an opening prepared for it in the cartilaginous meatus and emerges externally. It also is removed on the eighth day. Slight oozing may occur for awhile where the tube enters the meatus. This stops with a few touches of nitrate of silver. Cicatrization is firm by the fifteenth or twentieth day. All his patients have borne the tube well. It is invisible and occasions no inconvenience. The author has employed the operation in sixty cases. His position with reference to the operation is summed up in the following

CONCLUSIONS.

1. The operation which I have proposed and described under the name of scooping-out of the petro-mastoid is by preference the surgical treatment for dry chronic osteitis of the middle ear.

This procedure, based as it is on the physiological, structural and developmental characters of the tympano-mastoid system is author-

ized by the nature of the anatomical alterations which mark all varieties of this disease.

2. This mode of operating is the only one which allows free access to the structures in the cavity of the tympanum and to the pneumatic appendices of the middle ear.

3. Benefit will follow from the operation if the labyrinth is not yet affected, because the operative results are entirely governed by the state of the lesions of this part.

4. An attentive and methodical examination of the various parts of the auditory apparatus and of their functions is indispensable.

5. The ærial perception of the deep-toned fork should not be reduced too low if we hope to have an entirely satisfactory result.

6. The duration of the osseous conduction of the sound of the deep-toned fork ought to be as long as possible and nearly equal to the duration of the atmospheric perception of the same sound by a healthy ear.

7. The diminution and, above all, the abolition of atmospheric perception of the sounds of the high-toned fork are extremely grave and unfavorable signs.

8. Both ears should not be operated on at the same time. Unless there be some contra-indication the surgeon should commence with the deafer ear and that most troubled by subjective noises.

9. The different stages of the operation are:

(a) The retro-auricular incision, displacement of the auricle and meatus and peeling off the periosteum.

(b) Checking the hemorrhage and making the opening in posterior wall of the meatus.

(c) Clearing out the bone with a gouge and mallet.

(d) Enlargement of the aditus and opening freely into the tympanum.

(e) Restoring movement to the ossicles and freeing the tympanic cavity from bands and adhesions.

(f) Placing the U tube and gauze in situ.

(g) Complete closure of the wound and suturing the auricle in position.

(h) Applying the dressing.

10. On the eighth day the sutures are removed and on the tenth all is terminated.

11. The resulting improvement in hearing will be most marked for sounds of a high tone.

12. Subjective sounds due to a lesion of the transmitting apparatus and to an augmentation of intra-tympanic pressure disappear or diminish progressively after the operation.

13. As the U tube establishes a permanent communication between the tympano-mastoid cavities and the external air, intra-auricular pressure is regulated and, for the same reason, sonorous vibrations are also augmented.

14. Scooping-out the petro-mastoid with the employment of the tube is indicated in all cases where there is a diminution and narrowing of the spaces of the middle ear, such as occurs in sclerosing lesions and condensing osteitis. It completely provides for the pneumatic functions of the ear.

15. Simple scooping out of the petro-mastoid is to be preferred in all hyperplastic forms of otitis without chronic lesions of the bone.

16. The aseptic celluloid U tube when used gives no trouble; it is invisible and causes neither pain nor discomfort.

17. The benefit secured by the operation continues permanent.

Otitic Complications of Ozena (Ozena of the Ear).

P. LACROIX (Paris): In the paper read by the author, he first reports the case of a girl suffering from acute otitis media in whose ear, after paracentesis, he found the characteristic secretion of ozena, that is to say, a liquid matter in which were little crusts presenting quite the special odor of ozena. This is obviously a case of ozena of the ear.

The author next gives the result of his researches in forty-two cases of ozena. In thirty patients he found lesions of the middle ear. It should be added that, under such circumstances, a careful examination of the ear is necessary.

Finally, the author concludes that the otitic complications of ozena are very frequent and deserve the name of *ozena of the ear*.

Statistic Contribution to the Opening of the Mastoid in Chronic Suppurative Otitis Media*—A. LUCAE (Berlin).

Before reading my paper, I beg to inform you to avoid misunderstanding, that I attach great weight to the mastoid operation in the treatment of the chronic suppurative otitis media, especially as I have seen a great number of patients only cured by this means. The following observations apply merely to the abuse of the operation.

In the Berlin University Ear Hospital, 1,935 operations of the mastoid have been made between April, 1881, and August, 1899, 852 in acute and 1,083 in chronic cases of purulent discharge. By superficial observation one would, perhaps, be inclined to call the

* Abstract of this paper was received too late for publication in October issue with Mastoid Discussion.

number of operations large, as also the number of chronic cases, but competent aural surgeons will, I believe, agree with me that the number 1,083, compared with 852 acute cases, is a relatively small one.

I scarcely need to say that only a fraction of all chronic cases operated on concerns the opening of the whole middle ear ("Radical operation"), as this operation has only been made regularly during the last years.

To get an accurate idea of the number of radical operations, I have given the per cents of the operations taken from the number of cases of chronic purulent otitis media. For that purpose I have chosen the last four years (the Prussian "*Etats-Years*" from April to April) because during this time all patients have been treated by injections of a solution of formalin. By this treatment of purulent discharge, not only have many cases been cured without operation, but we have had the double advantage of arriving at an exact indication for the operation in cases treated with negative result. The above mentioned period gives the following results:

In 1895-96	Acute cases, 648.....	Operated on, 86 = 11.72%
.....	Chronic cases, 1413.....	Operated on, 118 = 8.35%
	Total, 2061.	
In 1896-97	Acute cases, 528.....	Operated on, 66 = 12.05%
.....	Chronic cases, 1208.....	Operated on, 85 = 7.03%
	Total, 1736.	
In 1897-98	Acute cases, 581.....	Operated on, 69 = 11.87%
.....	Chronic cases, 1119.....	Operated on, 69 = 6.16%
	Total, 1700.	
In 1898-99.....	Acute cases, 530.	Operated on, 61 = 11.87%
.....	Chronic cases, 1131.....	Operated on, 90 = 7.95%
	Total, 1661.	

I cannot satisfactorily explain the decrease in the number of all cases of purulent inflammation of the middle ear, the whole number of patients showing an increase from 6,536 to 6,704 in those four years. Perhaps the establishment of four private clinics for ear diseases in our neighborhood may account for the difference. I think the per cents speak for themselves, and show a small number of operations in chronic cases compared with the acute cases—those of 1897-98 being rather the half of the acute cases operated on. By the per cents you may further learn the small number of chronic cases operated on, and also see that a relatively small number of the acute cases called for operation.

I am sorry to be unable to compare this formalin period of the last four years with the former kinds of treatment, as a statistical comparison would give very doubtful results. In most cases the patients have been out-patients not regularly returning for treatment, and only a small number were treated as in-patients (clinic patients). I can only say that the general impression speaks for the formalin treatment compared with other medicaments formerly used, and especially with the acid borac treatment.

We have had our best results in chronic cases without dangerous symptoms ("cold cases"), there being only a fetid secretion. In general I may say, that after a daily treatment of from four to six weeks, if no alteration of the factor set in, the operation showed a more or less serious affection of the petrous bone (empyema with granulations, caries resp. necrosis, cholesteatoma) not mentioning the accidental intracranial affections.

Formalin has the double advantage of being a most antiseptic and also a very cheap medicament. I have found by experience that injections* of a solution of from 15 to 20 drops to a liter of water (purified by boiling) gives the best results. I have never observed any serious or lasting irritation of the ear—the only disagreeable effects have been especially noticeable in children. The solution sometimes runs down into the pharynx through the Eustachian tube, giving momentary pain; this can, however, be relieved by gargling with water. As the antiseptic power is very great we may eventually use a weaker solution.

Mr. P. S. G.: As I think in German I have spoken in my native tongue. But I now wish to say some words for the British ear non-understanding. I am of the opinion that the opening of the mastoid resp. of the whole middle ear is a very important help in the treatment of chronic suppurative otitis media. But one may also get on in plenty of cases by non-operating treatment. I beg to add, that instead of being proud of saying, "I have operated on so many patients" one should be prouder of saying: "I have cured so many patients also without operating."

* To avoid giddiness resp. lesions of the internal wall of the tympanum I call attention to my ear-cauula (which may be applied to every kind of syringe) being closed on the ear-end and having only side holes. A. LUCAE. "Zur konservativen und operativen Behandlung der chronischen Mittelohr-Eiterungen." *Therapeut. Monatsch.*, Berlin, August, 1897.

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

It is our purpose to furnish in this Department a complete and reliable review of the world's current literature of Rhinology, Laryngology and Otology.

Authors noting an omission of their papers will confer a favor by informing the Editor.

I. NOSE.

Anatomic Variation of the Nasal Chamber and the Associated Parts—M. H. CRYER—*Journ. Am. Med. Assn.*, October 14, 1899.

The article, which is profusely illustrated, shows the great frequency of variation in the bony structure of the face, head and cavities. The author concludes that there must be some general principles underlying these variations. At the commencement of the growth of the embryos, and continuing through life, there are two forces constantly acting on the body, known as the intrinsic and the extrinsic.

If these two forces be normal in strength and application throughout fetal life the result will be a symmetrically developed child, but if these forces be interfered with in any way, by lack of nourishment, or undue external pressure, the child will not be of normal physique. As development goes on the proportion of lime salts to the animal tissue in the bones, the age at which the sutures becomes united, and the firmness of the union, together with the development of the brain, determine the shape of the bony structures. ANDREWS.

The Minor Surgery of the Nose and Throat—GEO. L. RICHARDS—*Int. Journ. Surg.*, Vol. xii, No. 10, October, 1899.

There are many minor operations in these regions which the family physician should be able to perform. Accordingly the author in this article dwells upon the points which the general physician should be posted, and very correctly begins with the management and adjustment of the forehead mirror, the neglect of which dates from the doctor's graduation as a rule.

Enlarged turbinates, nasal polypi, atrophic rhinitis, nose-bleed and hypertrophy of the pharyngeal follicles are the conditions considered, and for the most part the advice given is excellent, and up-to-date. EATON.

The Treatment of Broken and Deformed Nasal Septa—HAL FOSTER—*Kansas City Med. Index-Lancet*, Vol. xx, September, 1899.

A newly fractured nose should always receive the same care and attention that a fractured forearm does. A mild antiseptic spray of Glyco-thymoline should be used in order that coagulated blood may be removed. The broken parts having been properly coaptated, a proper sized Asch splint should now be inserted into the broken side. * * * The splints should be held in place by small strips of adhesive plaster, and after two or three days they can be removed, thoroughly cleansed and reinserted in the nostril. For deviations of the septum the author mentions the usual operations; for the S-shaped deviation he prefers the Asch operation.

EATON.

Reflex Neuroses from Nasal Obstruction—H. L. BURRELL—*Western Med. Rev.*, September, 1899.

The author discusses at some length the theory of reflex irritation, and says: The histories of several cases in point are given.

DETWILER.

Reflex Neuroses from Nasal Obstruction—H. LESLIE BURRELL—*Western Medical Review*, Vol. iv, No. 9, September, 1899.

In this paper it is held that the conditions of the nose most liable to produce reflex phenomena in other organs are those in which we find the septum and turbinated body coaptated. In reflex asthmatic cases the author believes that there is a vasomotor paresis in the lining membrane of the bronchial tubes as a reflex phenomenon in which the vessels are engorged and the caliber of the tube encroached upon, and not a contraction of muscular tissue, as originally claimed by Salter. He cites a number of his own cases where various severe reflex disturbances were cured by nasal operations. In one case there were typical symptoms of migraine entirely relieved by operation on the nasal septum.

EATON.

II. MOUTH AND NASO-PHARYNX.

A Case of Chronic Urticaria of the Cervical Organs—MERN—*Münchener Med. Wochenschr.*, Sept. 5, 1899.

Description of a case involving the uvula, soft palate, tonsils and posterior walls of the pharynx, the tongue, epiglottis, vocal chords and false vocal bands. The disease came on in a series of irregular attacks, not all of the above-named organs being involved at any one time. Treatment was nearly without result. The most efficacious application being weak solutions of nitrate of silver. The predisposing cause of this chronic case was thought to be neurasthenia.

Following the history are some general remarks, but nothing particularly new is advanced.

VITUM.

The Use and Abuse of the Douche—D. BRADEN KYLE—*Internat. Med. Mag.*, September, 1899.

In treating diseases of the nasal mucous membrane calling for the application of cleansing solutions, the indications for the use of the douche are determined by the character of the secretion, irregularities within the nasal chambers and whether the process is acute or chronic. An irregularity which would direct the flow toward the Eustachian orifice would contraindicate the use of the douche.

An excess of fluid used acts as an irritant, and the time of application must not be long enough to irritate. Strong solutions defeat the object of treatment, and increase the trouble, and it is a good plan to discontinue the douche four or five days in every ten days or two weeks to determine whether or not irritation is kept up by its use.

If the patient complains of marked irritation, headache, pain in ears and a sensation of having taken cold after the use of the douche, he should discontinue it.

The temperature of the fluid used should be as warm as can be comfortably borne, and patients should be forbidden to blow the nose until ten or fifteen minutes after the application.

For use in chronic cases, the author recommends six grains each of sodium bicarbonate, sodium biborate, sodium chlorate and potassium bicarbonate dissolved in one ounce of distilled water.

In acute cases, and after operations, he uses, warm, equal parts of extract hamamelis (aqueous) and distilled water. DETWILER.

Congenital Insufficiency of the Soft Palate—H. GUZMANN—*Berliner Klin. Wochenschr.*, Sept. 11, 1899.

In this somewhat lengthy paper the author takes the view that during articulation there is a complete, or nearly complete, adaptation of the soft palate to the eminence of Passavant, thus shutting off the nasal from the oral cavity. A long series of arguments and of measurements is given to prove the correctness of this assumption. Certain forms of nasal speech seem to result from a shortened condition of the soft palate, which prevents its accurate application to the posterior pharyngeal wall. In the cases so far met with no operation has been necessary, because stretching and massage of the palate have overcome the difficulty. VITTM.

A Case of Primary Malignant Lymphoma of the Tonsil—HUGO MAMLOCK—*Archiv für Laryngologie*, Band ix, Heft 3, 1899.

A careful and accurate description of this rare affection, together with a very clear and detailed account of the method of differentiating it from carcinoma, sarcoma and leukaemic tumor. The cases of primary malignant lymphoma of the tonsil are very rare, less than a dozen being on record. VITTM.

Syphilis in the Throat—S. E. COOK—*West. Med. Rev.*, Vol. iv, No. 9, Sept. 1899.

The throat is considered, broadly, as including the naso-pharynx, fauces and larynx, and the subject is considered principally from a clinical and practical standpoint. The clinical features and diagnostic characteristics of the various lesions are clearly and concisely described, and the article is an admirable resumé of the subject. Two cases occurring in the author's practice—one of specific ulceration of the naso-pharynx, the other a similar affection of the larynx—are cited. In each case the protiodide and full doses of the iodide seemed to aggravate the conditions, while both were cured by doses of 80 to 100 grains of the iodide taken three times a day.

EATON.

Open Mouth and Short Upper Lip as a Consequence a Tight Frenulum Labii Superioris—B. FRÄNKEL—*Archiv für Laryngologie*. Band ix, Heft 3, 1899.

Three or four cases were brought to the author for suspected adenoids inasmuch as they breathed with the mouth open. An examination showed that the nasal and naso-pharyngeal cavities were free, and that, in fact, there was no real mouth breathing, although the patients kept their mouths continually open. They were, in fact, unable to close the lips. The frænulum was found to be thick and short. A slight operation, such as was formerly so frequently practiced on the frænum linguæ, corrected the trouble. The wound healed readily, and gave rise to no great inconvenience.

VITTUM.

The Vegetable Parasites of the Mouth and their Treatment—CARL RÖSE—*Münchener Med. Wochenschr.*, Sept. 5, 1899.

At a meeting of the Morphological and Physiological Society of Munich, the author gave a paper in which he comes to the conclusion that alcohol is the best material we possess with which to combat the vegetable parasites of the mouth.

He quotes Ahlfeld as coming to the following conclusions:

1. Absolute alcohol possesses no disinfecting power, but its dilutions do.
2. About a 50 per cent alcohol possesses the strongest disinfectant action. A higher or lower percentage diminishes this action.
3. Ordinary disinfectants lose their usefulness in high per cent alcohol. In 50 per cent alcohol, however, any given concentration of sublimate, carbolic acid, lysol or thymol is more effective than a corresponding watery solution.

The author states that, according to his own observations, alcohol possesses a specific healing action on the diseased oral mucous membrane. It gives rise to an arterial fluxion under the influence of which the venous congestion of the diseased gums gradually disappears.

VITTUM.

Observations on Tonsillectomy—J. HOMER COULTER—*Journ. Am. Med. Assn.*, September 23, 1899.

The author laments the want of precision in the terms used in reference to the pharynx and larynx. This is accounted for, probably, by the short history of the specialty as a distinct line of work.

All pathologic tonsils should be entirely removed, and any other procedure is injudicious, unscientific and unsurgical. Exception may be made in some cases of malignancy, syphilis and tuberculosis, with special manifestations in or about the tonsil.

The most serious pathologic conditions are not always found in the most hypertrophied tonsils. An overlapping pillar may so confine pyogenic germs as to force them into the surrounding tissues. Adhesions between the pillars and the tonsils impede the action of the pillars, and interfere with perfect vocalization.

A more perfect incubator of disease germs cannot well be imagined than is found in a pathologic tonsilar crypt.

Tonsillotomy as usually performed leaves the adhesions, and often the most diseased portion of the tonsil. Among the general results of tonsillectomy are: a cosmetically perfect throat, precludes the possibility of a return of tonsillitis; of absorption of toxins, or bacilli into the lymph channels at that point; liberates and allows a perfect action of the pillars and soft palate; removes a mechanical obstruction to the sound waves; and is likely to relieve reflex disturbances. The most convincing proof of the value of tonsillectomy as an operation is the satisfaction it gives the patient.

ANDREWS.

The So-Called Adenoid Habit—MAX HAGEDORN—*Zeitschr. für Praktische Aerzte*, September 1, 1899.

We have long been accustomed to the phrases scrofulous habit, apoplectic habit, tuberculous habit, and of late it is not uncommon to hear an adenoid habit of the body mentioned. It is the object of this paper to examine into what should be understood by this expression. Among the older writers it was assumed that those subject to a certain "habit" of the body possessed some peculiarity of structure which would account for their pathological condition. In this sense of course there can be no adenoid habit. If, however, we assume that this word may be used to designate those presenting a certain array of symptoms which will enable us to recognize the presence of these tumors at a glance, then in that sense we may speak of an adenoid habit. The author here gives in extenso the classical and well-known symptoms and appearances which indicate the presence of the adenoid habit.

No connection between adenoids and scrofula or tuberculosis is admitted by the author, so far as his own experience goes. He attributes a large influence to the acute infectious diseases, which he thinks oftentimes start up a pathological process in the hitherto normal pharyngeal tonsil. This is to say, after these diseases the children take on the adenoid habit.

External circumstances seem to play a very small part in the production of these tumors. We meet with them as often among the children of the rich as among children whose surroundings are not so favorable.

Inheritance is not of so great importance. Many families have been mouth-breathers for generations, and yet not a child of the younger generation will show the adenoid habit. In regard to climate the author is not so certain, but is inclined to think that some colder seashore regions favor the production of the habit in question.

VITTUM.

On Dissection of the Naso-Pharynx—MAX SCHEIER—*Virchow's Archiv*, Band 157, Heft 2.

The author gives at some length the various methods of Tröltsch, Wendt, Schalle, Politzer, Hansemann and Harke. All these, however, present difficulties in the technique or else leave the cadaver badly mutilated. It very often happens that an examination of the naso-pharynx would be desirable in cases where permission to open the skull cannot be obtained. The author's method enables us to dissect out the naso-pharynx without causing great mutilation. It is as follows: An incision is made about a finger's breadth below the point of the chin. This is carried around on each side to the angle of the jaw. The muscles and all soft parts are then divided close to the inner aspect of the lower maxilla. The knife should be carried around close inside the lower jaw until the tongue is entirely separated from it. The tongue and its muscles are then drawn down below the chin.

A frontal section is then made with a cartilage knife which passes between the hard and soft palate close up to the palatal process. In order to make this frontal section easily a block should be placed under the neck of the subject so that the head is bent sharply backward. The knife thus pierces through into the nasal cavities and the cut should be continued up to the base of the skull and laterally to the median lamella of the sphenoidal wings. In this way the septum is met far back, and its posterior portion as well as the choanæ themselves are divided from the anterior nasal structures. The mucous incision is now carried from the lower to the upper molars and the pharynx loosened from the vertebræ. This is easily done on account of the loose areolar tissue connecting them. In this way is reached the tubercle of the atlas and the pharyngeal tubercle of the basilar bone and the basilar fibro-cartilage. The roof of the vault is then loosened from the cartilage as much as possible, and after the lateral walls have been loosened the lateral muscles are divided, care being taken to cut through the Eustachian tubes as far outward as possible. When this is accomplished the formix can be dissected off the basilar fibro-cartilage by drawing the loosened structures first to one side and then to the other. The entire naso-pharynx can then be removed in one piece. The cavity left enables one to make a thorough inspection of the nasal cavities from behind.

VITTUM.

The Therapy and Etiology of Cervical Lymphoma—F. JESSEN—

Centralblatt für Innere Med., September 2, 1899.

The author has in view those large masses of glands which are most frequently situated at the angle of the jaw and on both sides of the sterno-mastoid muscles. Antiscrophulous and antitubercular treatment is unsatisfactory, while their surgical removal is frequently followed by disfiguring scars and long continued fistulæ.

He gives the history of a few cases where large masses of glands were present and had resisted all manner of treatment by specialists. Nothing whatever was done to the glands in question, but in each case adenoid vegetations were removed with the result of causing a speedy disappearance of the lymphoma.

The author then gives the history of two cases where the removal of adenoids caused the closure of fistulæ which had resulted from the removal of cervical lymphoma. In one case the cure was complete in eight days, in the other in fourteen.

The author concludes from these and other similar cases that the so-called cervical lymphomata of childhood usually have their origin in the pharyngeal tonsil. The reason that attention is not more frequently drawn to this fact is that these cases very often exhibit no other symptom of "Adenoids" than the presence of the lymphoma. Many cases breathe with closed mouth, no nasal obstruction is apparent, and yet the mirror or the finger shows the presence of the growth.

It is worthy of notice that the small soft polypous growths which do not obstruct the nose seem more inclined to give rise to lymphomatous swellings than the large hard adenoids which are more readily recognized by the nasal disturbances which they occasion.

Naturally a general treatment calculated to support and strengthen the system, will increase the rapidity with which the lymphomata disappear. This, however, is not absolutely necessary, for the cure will be complete if only the removal of the adenoids is accomplished,

VITTCM.

A Further Contribution to the Operation of the Hard Fibroma at the Base of the Skull, Together with Some Observations on Certain Disturbances of Speech—HOPMANN—

Münchener Med. Wochenschr., Sept. 5, 1899.

The author takes the view that in operating on these tumors, a preliminary operation, even the comparatively slight one of splitting the soft palate, is unnecessary. He reports in detail the case of a lad who had previously had a post-nasal fibroma removed and whose palate had been split at that time. A recurrence of the growth had taken place in spite of the fact that energetic after treatment had followed the removal of the first tumor. Indeed the soft palate had been left ununited in order that the physician in charge might have free access to the post-nasal region.

At the time of the second operation the tumor filled the entire post-nasal space as well as the nasal cavities. A portion of the

tumor could be seen through the right nostril, while a process half the size of a hen's egg projected between the divided halves of the soft palate and seriously interfered with deglutition. The tumor was thoroughly extirpated, the author even scaling up the bone to detach the growth totally. The remains of the soft palate were freshened and united. The nasal passages had been converted into one large cavity by the destruction of the septum, the turbinal bodies, etc., so that the post operative treatment consisted in daily filling up this cavity loosely with strips of gauze. This procedure, however, had another and an important object. As a consequence of the enlargement of the nasal and post-nasal cavities by pressure of the tumor, and in consequence of the imperfect action of the mutilated palate, both deglutition and speech were seriously interfered with. During the act of swallowing, ingesta, particularly liquids were forced into the nose, while the speech was wholly unintelligible.

All this was instantly changed as soon as the nasal cavity was loosely packed with gauze. The patient was able to swallow fluids without regurgitation, and the speech was comparatively clear. The latter was easily explained, for the articulation was then converted from rhinolalia aperta to rhinolalia clausa. VITTM.

III. ACCESSORY SINUSES.

A Case of Cystic Degeneration of the Mucous Membrane of the Nose and its Accessory Cavities—FRIEDRICH SCHLAFENHAUFER *Wiener Klin. Wochenschr.*, August 31, 1899.

The paper is a description of a very interesting case of cystic degeneration of the mucosa of all the cavities except the frontal sinus. The case terminated fatally from a meningitis, and an opportunity was thus offered for a careful and systematic examination of the parts affected. The right sphenoidal sinus, which was dilated far beyond the normal, contained seven or eight cysts varying in size, the largest being as large as a cherry stone. Two of the cysts were situated directly on the sphenoidal opening, and the author is of the opinion that the obliteration of this opening, thus brought about, was the cause of the dilated condition of the cavity. The left antrum contained twenty-one cysts and the right twelve, but neither cavity was dilated. A number of small cysts could be seen in the ethmoid cells. The nasal mucous membrane was much thickened and studded with cysts of varying sizes. Cysts were also found on the pharyngeal walls, the base of the epiglottis and the base of the tongue. A very careful histological and chemical examination of the cystic fluid leads the author to the conclusion that the glands of the nasal mucosa are of a mixed nature secreting a mucous and a serous fluid in about equal quantity; that the glands of the accessory cavities are also of a mixed nature, but that here the secretion of serous fluid far exceeds that of mucus. VITTM.

Empyema of the Frontal Sinus—J. HEGETSCHWEILER—*Correspondenzblatt für Schweizer Aerzte*, August 1, 1899.

The first part of the paper is taken up with a discussion of the purulent inflammations of the sinuses in general. The author then reports a case of frontal empyema where the diagnosis was obscured by the fact that an exploratory puncture revealed the presence of pus in the antrum. Further investigation, however, demonstrated that this latter collection was due to drainage from the frontal sinus. A free communication was then established between the frontal sinus and the nasal cavity. In spite of frequent flushing of the frontal sinus, the discharge continued, and recourse was finally had to the external operation. VITTM.

Diseases of the Antrum of Highmore—L. C. CLINE—*Jour. Am. Med. Assn.*, Sept. 23, 1899.

One hundred and fifty cases are reported and the following points emphasized: The large proportion of cases that are traceable to la grippe; the absence of polypoid growths; the greater predominance on the right side; the importance of a good-sized opening, and the removal of all diseased teeth. Opening the antrum by the alveolar route is by far the best method. Hot douching is used to relieve the edematous condition. The dry treatment alone, after the first washing, has not been a success. ANDREWS.

IV. LARYNX AND TRACHEA.

Foreign Body in the Air Passage, with Report of a Case—R. E.

ESKILDSON—*West. Med. Rev.*, Vol. iv, No. 9, September, 1899.

A girl, aged five, swallowed a cherry stone and a severe attack of dyspnea at once followed. As she was about to go into a convulsion, chloroform was administered, and the breathing became easier. Examination with the phonendoscope showed that the stone had lodged in the right bronchus. Just before the child came from under the influence of the chloroform, $\frac{1}{12}$ grain of morph. sulph. and $\frac{1}{300}$ grain of atrophine sulph. were given hypodermically. This relieved the most distressing attack of dyspnea.

In consultation the expectant plan of treatment was continued. A sedative mixture of $\frac{1}{8}$ gr. codein sulph., potass. bromide gr. viii., in a teaspoonful of simple syrup was administered p. r. n. The cough decreased very much at the end of the week, the temperature never going above 101° , and after the first week it became normal.

In the fourth week the child began to expectorate muco-pus and during a light coughing spell, nearly seven weeks after swallowing it, she coughed up a large cherry stone and fully recovered. EATON.

On the Transplanting of Costal Cartilage into the Larynx for the Cure of Severe Stenoses and Defects—F. VON MANGOLDT—

Archiv für Klin. Chir., Band lix, Heft 4.

After some general remarks as to the transplantation of bone cartilage, etc., into the larynx, the author reports four cases in which he made use of hyaline costal cartilage for the purpose. A very careful and complete history is given of one case as a sample of all.

He first removes a thin slice from the eighth costal cartilage and imbeds it under the chin between the skin and the areolar tissue. After a lapse of several weeks laryngofissure is performed, and a flap containing the transplanted cartilage is interposed between the two thyroid plates, which are drawn asunder for that purpose. Here it is fastened with sutures. His results have been good, although the patients have been compelled to undergo a dilatation cure subsequent to the operation. Still this was short and always effective. The tissues seemed to yield and stretch easily, so that the natural lumen of the larynx was restored. VITTMUM.

The Connection of the Female Generative Organs and Laryngeal Affections—SEYMOUR OPPENHEIMER—*Phila. Med. Jour.*, Jan., 1899.

The connection was recognized in earliest antiquity, as evidenced in castration. Certain animals and birds are cited who never utter a sound except in the breeding season. The connection is markedly visible at puberty. The extreme delicacy of the laryngeal mechanism renders it reflexly susceptible to change in other portions of the organism. Perfect innervation is necessary to perfect nerve control, and the latter to proper adjustment of the cords. Thus we have the intimate connection between the sympathetic nerves and the female generative organs. In many cases the author has demonstrated the relationship, mysterious though it is, by failing to cure the larynx until the uterine disorder had been relieved. The extreme claims of Seiler are endorsed, who invariably diagnosed the presence of uterine trouble by inspecting the pharynx and larynx—"by slight differences in the appearance of the mucous membrane, and in the position of this pathologic condition of the upper air passages a distinction can even be made between uterine and perinterine disease, and when the condition referred to is more prominent in the larynx and pharynx the case is intra-uterine." The condition referred to is a peculiar bluish tint compared to the atmosphere of a clear sunset in autumn. Howard A. Kelley is declared to have confirmed all of Seiler's diagnosis made with the laryngoscope. Various reflex throat disturbances and coughs may occur at puberty, the climacteric, and during the menstrual period, so that it is important to ascertain the condition of the generative organs in females suffering from laryngeal disorders. F. C. E.

V. EAR.

The Conveyance of Infection Through the Medium of the Ear Syringe; a Remedy—FRANK C. TODD—*Journ. Am. Med. Assn.*, October 14, 1899.

The argument advanced is that with the ordinary piston syringe as commonly used the tip becomes contaminated by contact with the ear, and with the discharge that is being washed away. Then when fluid is drawn into the syringe again the interior becomes infected, thus endangering the next patient upon whom it is used.

A fountain syringe with several glass tips is advocated. The tip should be removed and disinfected after using. ANDREWS.

The Family Physician and the Middle Ear—E. E. CLARK—*Medical Standard*, Sept., 1899.

In a well-written article the author urges the importance of the general practitioner recognizing the gravity of middle-ear suppuration. Many a child has, through early neglect, contracted a chronic suppuration of the ear that later sent it to an untimely grave because of the extension to contiguous structures.

The causes, course of the disease and symptoms are given.

In the treatment great importance is attached to the inflation of the Eustachian tube and middle ear. The catheter is rarely used. The use of Bishop's improved inflator is advocated.

Any nasal or naso-pharyngeal abnormalities should be corrected. ANDREWS,

Remarks on the Brain Lesions Following Infective Middle-Ear Inflammations, with Special Reference to Symptoms, and Briefly as to Operative Measures—B. E. FRYER—*Kansas City Med. Rec.*, Vol. xvi, Nos. 8 and 9, August and September, 1899.

An extensive paper containing valuable points. The author considers that the only thoroughly radical operation is Stacke's. In addition to the usually cited routes by which infection travels from the tympanum to the cerebrum he draws attention to the tympanic branches of the internal carotid as being, in his opinion, the most frequently followed channels. The symptoms of epidural pus; subdural pus, including leptomeningitis; cerebral abscess; sigmoid sinus thrombosis; and cerebella abscess are considered. The author emphasizes and urges that, "In any given case of chronic purulent otitis media which has not yielded to the modern treatment for such condition, continued, say for six months, the time has passed for further delay with safety," and the radical operation should be done.

The surgical technic for the relief of otitic brain lesions is briefly rehearsed. EATON.

The Facial Nerve in its Relations to the Aurist—GEO. L. RICHARDS—*Annals of Otol., Rhinol. and Laryng.*, May, 1899.

This paper is a strong plea for a more careful consideration of the importance of the facial nerve in all operations in the middle ear. Attention to this nerve is justified because of the distressing deformity produced by paralysis, and the seriousness to the practitioner, particularly in small cities where acquaintance is general. The regional anatomy is discussed, and the danger of injury to the nerve is emphasized in such operations as are done for mastoiditis, cholesteatoma, ossiculectomy and curettage. The author agrees with Burnett in considering the sharp curette dangerous for the removal of granulation tissue. The dull wire curette is preferable. Even the probe has its dangers. It is also possible to injure the nerve with the auris hook. The author regrets the limited consideration of this nerve in most of the text-books, an evidence of the lack of realization of its importance.

F. C. E.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.**The Mechanism of Suffocation in Swallowing large Masses of**

Food — BENJAMIN RISCHAWY — *Wiener Klin. Wochenschr.*,
August 31, 1899.

The mass of food found in autopsies of these cases almost always consists of sinewy and tough pieces of meat. In this paper the author does not discuss those cases where the food has fallen into the larynx, or where the mass is so large as to be absolutely unable to pass through the esophagus. Rather he refers to those cases where a mass is found resting upon the aditus and laryngem and yet is not so large that it might not easily have passed through the esophagus. His explanation is this. During rest and relaxation of the throat the larynx is the direct continuation of the pharynx, with the esophagus pushed up behind it against the vertebræ, and if food could be passed downward at such a time it would inevitably enter the air tract. During the act of swallowing, however, the larynx is drawn upward and forward by the action of the hyothyroid, the genio-hyoid, the mylo-hyoid and the anterior belly of the digastric. The epiglottis which now underlies the base of the tongue is pressed down upon the aditus, thus completely closing the entrance into the larynx. If now for any reason this contraction of the above named muscles is interrupted during the act of swallowing, everything is relaxed and the larynx sinks back to its former position just below the pharynx. The pharyngeal muscles no longer hold the mass firmly, and it naturally falls by its own weight right across the laryngeal entrance. The mass being now out of the mouth and in a situation where it cannot be regurgitated, suffocation naturally follows.

VITUM.

BOOK REVIEWS.

Text-Book on Diseases of the Nose and Throat. By D. BRADEN KYLE, M.D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College; Consultant in Laryngology, Rhinology and Otology, St. Agnes Hospital; Bacteriologist to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Fellow of American Laryngological Association, etc. 8vo, cloth, pp. 646, with 175 illustrations, 23 in colors. Price, \$4 net, in sheep or half-morocco, \$5. W. B. Saunders, 925 Walnut street, Philadelphia, 1899.

Of the several publications which have recently been added to the literature of rhinology and laryngology, this volume embodies the most numerous, requisite points of excellence.

The general arrangement differs somewhat from that of other text-books, the author taking the pathology of the subject under consideration in making his natural classification. As classifications, however, are frequently arbitrary, this feature of the volume is of minor importance.

Among the factors of real merits of this text-book are the clear and concise text, and its convenient arrangement for ready references; the many carefully selected original illustrations taken from the author's interesting collection to elucidate the text; the collection of excellent lithographs, many of them in colors, illustrating anatomy and pathology. The artistic colored reproductions of microscopic sections of described neoplasms are especially worthy of mention.

Particular attention has been given to the illustration of operative technique; the author records his own method of treatment, describes his favorite instruments and presents his personal methods wherever opinions may vary. The entire volume bears the stamp of individuality, which, after all, is one of the strongest features of a text-book.

Detailed references and reports of individual observers are omitted; the subject matter is comprehensive, yet presents all necessary data, and thus serves the three-fold purpose of value to the student, general practitioner and specialist.

We also desire to compliment the publisher on the excellent typography and style of this volume, and assure our readers that this text-book deserves a prominent place in their library.

In conclusion, we offer our congratulations to the author for having produced one of the best American text-books yet published on Diseases of the Nose and Throat.

G.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M.D. (Univ. of Penna.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc. Ninth Series, Volumes I, II and III, 1899. J. B. Lippincott Co., Philadelphia.

We take pleasure in directing the attention of our readers to our Abstract Department for reviews of the various subjects contained in these three volumes of the International Clinics, Ninth Series, included in the scope of THE LARYNGOSCOPE.

The monographs of especial note in oto-laryngology in volume I, are: "The Treatment of Chronic Bronchitis by Means of the Ipecacuanha Spray," by Arthur T. Davies, of London; "Laryngo-Spasm, Eclampsia and Tetany in Children, and Their Connections with Rachitis and with One Another;

Laryngo-Spasm, Enlarged Thymus and the Lymphatic Constitution," by Prof. A. Bagnisky; "Autoscopy of the Larynx and Trachea and Its Relations to Esophagoscopy," by Alfred Kirstein.

Volume II contains: "Super-heated Air as an Hemostatic," by Dr. Hollander; "Stuttering; Its Causes and Treatment," by Dr. Hermann Gutzman; "Laryngeal Papillomata; Influenzal Laryngitis; Lacunar Tonsillitis, and Some of Its Sequelæ; Railroad Asthma, by Prof. Fraenkel.

Volume III contains: "Cancer of the Esophagus," by Prof. R. Stintzing; "The Treatment of Tuberculosis," by Prof. J. Grancher; "The Surgical Treatment of Benign and Malignant Strictures of the Esophagus," by Prof. Garre; "Remarks upon the Treatment of Diphtheria with Especial Reference to the Technique of Intubation," by S. G. Dabney; "Clonic Spasm of the Soft Palate, with Ticking Sounds in the Ear," by Prof. M. Bernhardt.

A Manual of Diseases of the Nose and Throat. By CORNELIUS GODFREY COAKLEY, A.M., M.D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College of New York; Laryngologist to Columbus Hospital, the University and Bellevue Medical College Clinic and the Demilt Dispensary. 12mo., cloth, 536 pages, with 92 engravings and two colored plates. Price, —. Lea Brothers & Co., New York and Philadelphia, 1899.

This manual is designed as a companion volume to Bacon's Manual of Diseases of the Ear. It is especially adapted to the wants of the general practitioner and post-graduate. Special attention has been given to the methods of examination, diagnosis and treatment.

From the large field at his disposal, the author has selected the most popular methods of treatment, and lays special stress on their detailed description.

We are pleased to note that considerable attention is given to differential diagnosis. The descriptions of operative procedures employed in deviations of the septum (Asche's operation), removal of adenoids, the use of the Grünwald set in operative work on the accessory sinuses, the technique of intubation and the various forms of instrumental applications to the nasopharynx and larynx are especially considered.

The concluding chapter on therapeutics contains a brief résumé of much practical interest, including a classification of drugs, according to their local actions, and many special prescriptions, together with indications for their employment.

This volume is especially adapted to the needs of the post-graduate and general practitioner, and contains numerous suggestions from the author's practice, which may also be of value to the laryngologist. G.

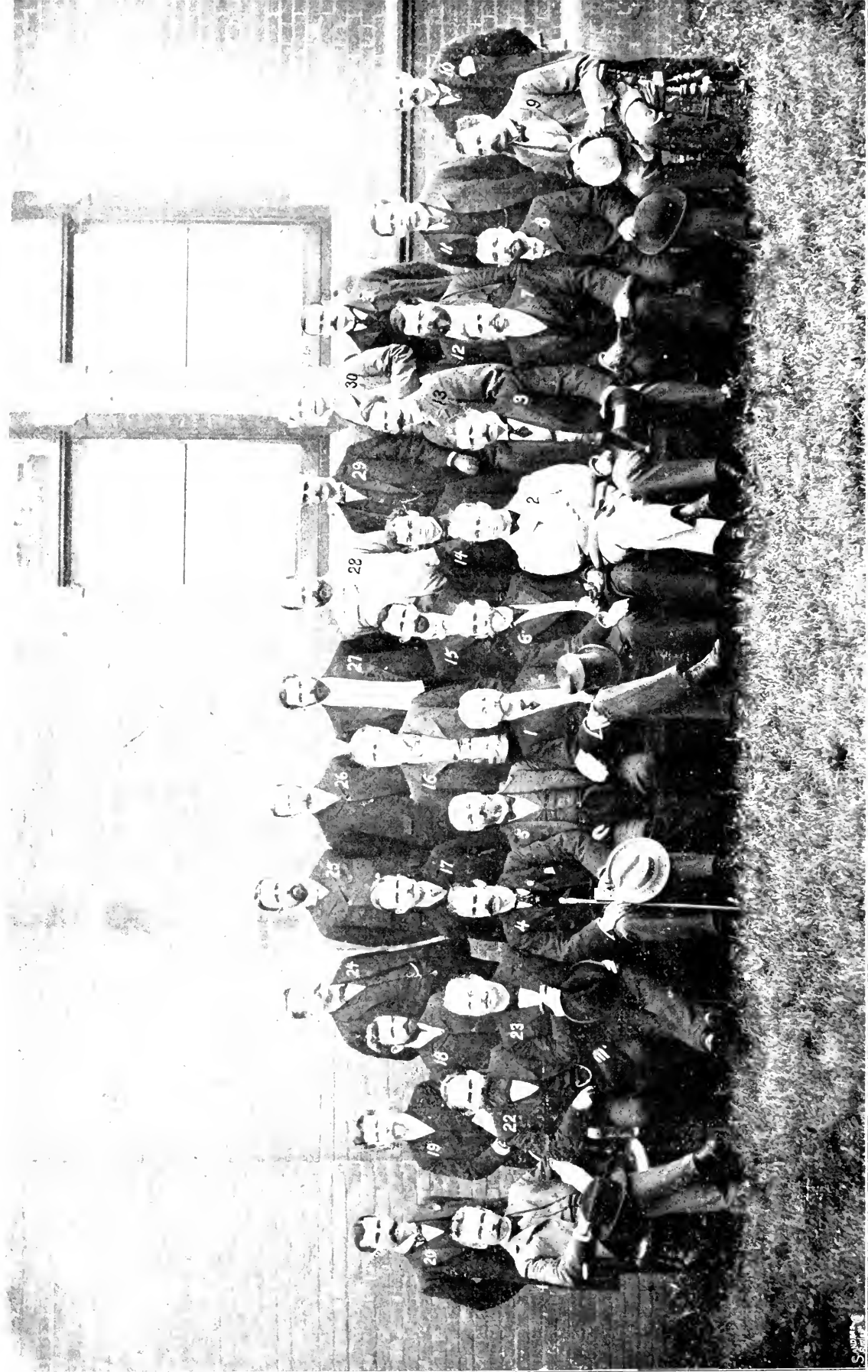
International Directory of Laryngologists and Otolologists, containing the names and addresses of practitioners engaged in the study and practice of laryngology and otology. Compiled by RICHARD LAKE, F.R.C.S. Published under the auspices of the Journal of Laryngology, Rhinology and Otology; The Rebman Publishing Co., 129 Shaftsbury Ave., Cambridge Circus, London, England, 1899. Price, 65 cents.

Now that the specialties of otology and laryngology have grown to such formidable proportions and numerical strength, a special directory, as herewith issued, supplies an important want.

Recognizing the many difficulties with which the compiler of such a directory is beset, and appreciating the amount of detail work necessary to such a publication, we can most readily overlook the various short-comings of this volume, and the sundry mistakes in names and addresses.

We fail to understand the purpose of extended criticisms published by several of our contemporaries. We predict that the succeeding editions of this directory will gradually eliminate the inaccuracies of the first issue, and THE LARYNGOSCOPE will contribute its aid and best wishes to the compiler for the success of the revised edition. We commend this little Directory to every active confrere as a valuable desk companion.

We will, furthermore, suggest that all physicians specially engaged in the practice of laryngology or otology, forward their name and address to the publisher. G.



LARYNGOSCOPE.

V. VII.

ORIGINAL MUSIC

A REVIEW OF THE DEPENDENT POSITION OF DENTAL SURGERY IN CHRONIC SUPPURATIVE OTITIS

Mathematical Biology

Dr. St Clair Thompson, London.

Dr. H. H. Wright, Washington, D. C.

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Dr. Köpke-Soliman

И. И. Мельников

152 Dr. L. J. Mink, M.D.

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1. *Principles of the Law of the State*

BYE, HOLLAND! MAGNIFICENT

В. В. ПЕТРОВ

TO: Dr. Yehuda Goren

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MEETING BOBTSWORTH

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While the literature on the dairy country statistics to the Department of Agriculture does not presently say as much as it should, it does indicate that there is doubt whether

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SECTION OF LARYNGOLOGY AND OTOTOLOGY.

BRITISH MEDICAL ASSOCIATION, ANNUAL MEETING, PORTSMOUTH, AUGUST, 1899.

1. Dr. Cresswell Baber, Brighton, *President*.
2. Dr. Herbert Tilley, London.
3. Dr. Forde.
4. Dr. P. Watson Williams, Bristol, *Secretary*.
5. Dr. E. J. Moure, Bordeaux.
6. Dr. Symonds, London.
7. Dr. Malherbe, Paris.
8. Dr. Louis Bar, Nice.
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10. Dr. Logan Turner, Edinburgh.
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30. Dr. StClair Thomson, London.
31. Dr. H. S. Birkett, Montreal.

THE LARYNGOSCOPE.

VOL. VII. ST. LOUIS, MO., DECEMBER, 1899. No. 6.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

A REVIEW OF THE PRESENT POSITION OF INTRA-TYMPANIC SURGERY IN CHRONIC SUPPURATIVE OTITIS AND IN SCLEROSIS OF THE MIDDLE EAR.

BY PROFESSOR GHERARDO FERRERI, ROME.

Translated by

DR. STCLAIR THOMSON, LONDON, ENG.

Intra-tympanic surgery has rapidly overcome a very large series of difficulties. This arose partly from preconceived errors in practice and in the physiology of the ear as well as from the fear with which every medical novelty is received until the results of experience have removed all doubts. I have already to some extent treated the subject in a long article published in the *Archivio Italiano Otologia*, in the Jubilee number dedicated to Professor De Rossi in the year 1897. In that article, however, I limited myself to a consideration of suppurative processes and their results in the middle ear, and not to the sclerotic forms which are found in varying degrees up to even secondary lesions of the labyrinth. This was due to the fact that, like many others who had long studied otology, and particularly intra-tympanic surgery, I felt a certain reserve in giving an absolute opinion on the value of operative measures in chronic non-suppurative diseases of the middle ear.

While the literature of every country has contributed favorable statistics to the results of surgery in suppurative otitis media, we cannot at present say as much for the hyperplastic form and its consequences. Indeed, there is doubt whether the feverish operative

activity of certain otologists in the sclerotic form has not compromised the progress of intra-tympanic surgery and checked its real progress, that is to say preventing us from knowing, at least for a while, in which morbid forms and in what stage it is useful to intervene surgically.

The study of statistics has often been abused as elevating an altar to some new operation. They have been even employed for supporting an incredible argument, viz., according to some, that the demolition of a sclerotic mastoid will arrest a most advanced process of sclerosis in the tympanic cavity, with secondary deep alterations in the internal ear. Statistics, in themselves, are not sufficient unless pathological anatomy is kept in mind. I am of opinion that we have gone too far in attributing suppuration in the tympanic cavity to caries of the ossicles, and especially of the attic. With regard to the histological examinations in each case operated on by myself, in thirty-eight cases of purulent otitis media the ossicles under the microscope were found to be diseased in only one half. I would add that these cases had been cured by ordinary conservative methods and not by radical intervention, because the morbid process did not primarily start in the bone but in the mucous membrane. The necessity of extracting the ossicles was only required in order to re-establish hearing, which was damaged by the immobilization of the chain of bones.

(A) Intra-tympanic surgery in chronic suppuration, and its results.

Operations on the tympanic membrane in chronic purulent otitis media have been completely abandoned by me. With regard to extraction of the malleus and incus we must distinguish:

- (a) Suppurations resulting from lesions of the ossicles;
- (b) Those from the walls of the antrum, and
- (c) Those due to pyogenic processes in the antrum and mastoid cells.

It is clear that if we wish to obtain simple drainage of the middle ear in cases of suppuration of the antrum it would be difficult to attain this by simply extracting the malleus. For this we ought to follow on with avulsion of the incus, without any regard to its healthy or diseased condition. When one has simply to do with the escape of the matter from the attic, it will be sufficient to remove the malleus, even if healthy, without having recourse to the extraction of the incus. In the case of caries of the attic walls and of the aditus ad antrum I extract the incus as a preventive operation, in order to curette and cauterize the diseased parts.

Failure in intra-tympanic operations depends upon general conditions, such as tuberculosis or the presence of ozena. If the antrum and mastoid are affected the extraction of the ossicles can do no good. When the purulent process has ceased in the various cavities of the tympanum, it is then the time for surgical interference so as to improve the physical condition of the ear. Then one has recourse to section of the tensor tympani, section of the adhesions, or mobilization of the stapes.

It should be a rule not to proceed to operative measures as a result of suppuration until the latter has ceased for some time.

During the year 1897-98 the patients who were submitted to the extraction of the malleus and incus through the external meatus reached the considerable number of 86, of whom 41 were male and 45 female. With regard to ages it is to be noted that the majority were adults, as can be seen from the following table:

From 8 to 10 years	3 patients
From 10 to 15 years	12 patients
From 15 to 20 years	24 patients
From 20 to 25 years	21 patients
From 25 to 30 years	9 patients
From 30 to 35 years	6 patients
From 35 to 40 years	6 patients
From 40 to 45 years	3 patients
From 45 to 50 years	1 patient
From 50 to 55 years	1 patient

With regard to the length of time that patients had been affected, there were:

Less than one year	6 patients
From 1 to 5 years	31 patients
From 5 to 10 years	12 patients
From 10 to 15 years	5 patients
From 15 to 20 years	1 patient
From 20 to 25 years	1 patient
From infancy	31 patients

Of 86 patients there were 60 (69.60%) affected with purulent chronic otitis media: 26 (30.16%) with the results of suppuration. The ossicles were found affected with caries in 38 instances (44.08%), thirty-one times the malleus and seven the incus. Orne-Green (*Boston City Hospital Medical and Surgical Report*, 1895) gives a statistic of 60 extractions of carious ossicles: of these patients eight underwent simple ablation of the malleus, while in all the others the incus was also removed.

Grunert compares his statistics (*Archiv. für Ohrenheilk.* Band xl. Heft 1). I herewith compare mine:

MALLEUS.

Bone Diseased.	Orne-Green.	Clinic of Halle.	Ferreri.
Head	60 %	32 %	47.34%
Handle	50 %	25 %	23.67%
Neck	48.3 %	14 %	7.89%
Superficial articulation.....	31.7 %	7 %	5.26%
Short process	13.3 %		7.89%

INCUS.

Bone Diseased.	Orne-Green.	Clinic of Halle.	Ferreri.
Long Branch.....	100 %	72 %	5.26%
Body	84.6 %	46 %	10.52%
Short process	40.6 %	43 %	
Superficial articulation.....	28.8 %	29 %	5.26%

With regard now to a fuller pathological examination of the removed bones which were manifestly diseased, of thirty-eight cases I found that in twelve the lesions of the malleus and incus were very slight and consisted essentially in atrophy, shown by rarefaction of the bony tissue and by the diminution of volume of part or all of the ossicles. In several cases atrophied bone was seen to be surrounded by a tissue of granulations. In a larger percentage of cases on the contrary (23 in 37), I found a greater alteration in the several ossicles, consisting in circumscribed or diffused caries. In all or nearly all of these cases what struck one at first view was the deformity of the malleus or incus due to enlargement of certain parts and to the thinning or disappearance of other parts. With regard to the extension of the carious processes this was frequently found circumscribed in one portion of the superficies of the bone, sometimes more deeply. In the case in which the alteration was more serious small necrotic sequestra were found circumscribed by granulation tissue. Rarely the bone was seen to be deformed by the disappearance of some portion, although the microscopic aspect was normal; and this suggested a cured caries. The carious ossicles were generally found surrounded by granulation tissue, which was sometimes so developed as to form true polypoid vegetations.

The carious bones were sometimes altered on their articular surface, thus explaining the ankylosis of various ossicles. In none of these cases was I able to demonstrate under the microscope any tubercular change. These cases make one hold the opinion that the various alterations in the ossicles are secondary to chronic suppuration in the tympanic cavity. This opinion is not debatable in those cases in which the alteration in the ossicles is represented by a simple atrophy, or by an ankylosis of the malleus and incus. But it is also the most likely interpretation which can be given in those cases in which the bony lesion is more profound. Indeed we often see caries

circumscribed at a short distance from the surface of an ossicle; at other times we see the lesions limited to the periosteum. Other considerations led to the conclusion that lesion of the ossicles, even when serious, is always secondary to diffusion of inflammation which has primarily attacked the mucous lining of the tympanic cavity.

* * * * *

Much more difficult in the present state of affairs is the appreciation of the general value of *surgical interference in the cure of chronic otitis media of the hyperplastic form* (otherwise called dry, or adhesive, or sclerotic otitis) on the choice of operative measure, and on the indications. Possibly otology from the curative point of view would have already established some more positive data for practitioners if the feverish activity of certain specialists in the surgery of the middle ear had not been so precipitate, confusing frequently in one study suppurative otitis media and its consequences with the sclerotic otitis from various causes and more or less complicated with secondary lesions of the labyrinth.

It is enough to give a glance over the otological literature of the last ten years to see that when there is a question of operative interference, of technical or surgical methods, there is most inclination to the clinical side, neglecting the distinction between one otological process and another, as if the result of the treatment did not depend in the majority of instances as much on the nature of the morbid process as on the surgical treatment.

Only latterly have we arrived at distinguishing with relative decision the limits in which surgery must confine itself, distinguishing those cases which can still be remedied from those in which nothing was to be expected in attempting to arrest the fatal progress of an otitis media chronica hyperplastica. What effects could one ever expect to have from surgery when the sclerosis has already advanced to the atrophic stage, and one has to do not with a simple rigidity of the conducting apparatus, but with an atrophy of the nerves of the basilar membrane? And what could we expect from mobilization of the stapes, and even from stapedectomy, where there exists at the same time alterations in the fenestra rotunda? And if the nervous acoustic apparatus is already so far compromised as not to hear more than the three lower octaves and even when the hearing has declined to below 20, 10, or 5 thousand vibrations, why should we still interfere knowing that even the operation of stapedectomy is demonstrably useless and even frequently harmful? It is much better to leave these unfortunate deaf patients to their unhappy lot sooner than compromise the future of intra-tympanic surgery.

It is the functional examination rather than otoscopy which will be found our best guide in this matter. In addition we should make use of the knowledge which only a careful history of the patient can inform us. Indeed it would be strange to ignore the general condition of the patient, a special diathesis, the nature of the infection which determined the progressive deafness, or the question of the menopause and of nursing in women, of the hereditary tendency to affections of the ear, of the age, of the length of time the process has lasted and lastly of the more or less rapid progress of its development. The indications for an operative measure should differ, according to my point of view, according to the predominating functional disturbance, since personal experience leads me to believe that to diminish and even to arrest paracusis and vertigo depending on labyrinthine compression it may be sufficient to remove simply the incus or the first two ossicles, whereas to arrest the steadily progressing deafness it is better to do a stapedectomy in the properly selected cases—that is to say in cases still susceptible of surgical treatment. In this I am not agreed with Burnett who observed in a series of ten cases of vertigo and deafness consecutive on sclerosis of the tympanum, that from removal of the membrane and the two first ossicles the deafness remained as previously, whereas the vertigo and tinnitus was mitigated. Burnett, therefore, in vertigo and paracusis actually limits himself to extirpation of the incus so as to limit the pressure of the stapes. (*American Journal Med. Sciences*, October, 1896.)

Any operative interference would therefore be reprehensible if undertaken in the forms of sclerosis which have already advanced to the atrophic stage, in which through the thin tympanic membrane we can easily recognize a hyperemia of the posterior wall of the tympanic cavity at the level of the promontory. These deaf people must be abandoned to their fate unless the lesion is unilateral and it is hoped, as a last resource, to practice the mobilization of the stapes and even stapedectomy on the worse ear in the hope—however problematic—of arresting a hyperplastic process which already may be much advanced on the other side. Amongst the indications which Moure gives as a *sine qua non* for surgical action would be the immediate perception of the watch applied to the bones of the skull heard better on the deafer side; a negative Rinne with both low and high tuning forks; a temporary improvement to the hearing with insufflation with Politzer's bag or the catheter. And Moure also believes that these cases of chronic otitis media sclerotica will have a more certain improvement from extirpation of the malleus and incus when a simple exploratory myringotomy gives an improvement in

hearing and diminution of tinnitus and vertigo. If the anatomical structure of the region prevents the easy removal of the incus and view of the stapes, Moure recommends the breaking away of the postero-superior part of the tympanic ring in order to discover the niche of the ossicles and mobilize the plate of the stapes, without acting directly on this latter ossicle.

Stapedectomy, first performed by Ketzell in 1877, and then by Bezold, Blake, Botey, Grunert, De Rossi, Faraci, Dench and Jack has not had, in Moure's opinion, the certain success that was expected by all these operators, there being considerable doubt as to the improvement of the tinnitus, the deafness and the vertigo. Indeed, in some cases they were aggravated. But besides, how could we believe extraction of the stapes possible in sclerosis of the middle ear of ancient standing in which the stapes is mostly surrounded by a bony mass which fills up the fenestra ovale and deposits of ossification and decalcification hide even the fenestra rotunda?

In a comparative study published by A. Cheatle on the question of operative intervention in dry chronic otitis media (*The Practitioner*, May, 1897, page 494) the opinions of some of the most illustrious otologist in the world have been collected. Cheatle states that, with few exceptions, otologists at present are either averse to any operative interference altogether or reserve their opinion in expectation of settling which cases are and which cases are not suitable for operation.

Notwithstanding the discordant and often discouraging results it is not to be denied that in a few cases remarkable relief has been obtained, if not in the hearing power at least with regard to the tinnitus. One of the strongest arguments against operation is that certain individuals are rendered worse by it. Cheatle says that in sclerosis of the middle ear the best results were obtained when the rigidity was more or less limited to the membrane, and to the two larger ossicles. He thinks that before proposing a radical treatment all other conservative measures should have been tried, and that one should never fail to warn the patient that amidst the risks of a radical operation are those of being rendered worse by it.

As a rule the exploratory opening in the membrane will always be carried out, and if no improvement results nothing further should be tried. In a favorable case, on the other hand, it will be justifiable to extract the malleus and incus and mobilize the stapes, and finally, if necessary, to remove these ossicles.

Faraci, who has recently studied this question thoroughly, gives special consideration to those cases in which the acoustic diminution

is exclusively due to immobility of the stapes by adhesions which fix the branches to the walls of the niche, as well as to functional alteration in the rest of the chain. In such cases he thinks it desirable to directly remove the obstacle which prevents the stapes from motion in the fossa ovale: since the chain of bones is the principal route through which the sound arrives at the labyrinth. If we have to do with an ear which is sound in its perceiving apparatus, and myringotomy and myringectomy reduced by a fraction however small a power of hearing of all sounds, and this diminution is still greater with disarticulation of the incus, when on the other hand by sclerosis of the tympanic cavity the acoustic nerve is not compromised by alterations of the transmitting apparatus, but by rigidity of the stapes in the fenestra, it will be desirable to put in execution this method of mobilizing the stapes which preserves intact the chain of ossicles.

For this purpose, having cut the tympanic flap after the classical method of the Roman School, and resected the external wall of the tympanic ring with his special cutting pliers, Faraci in order to remove the adhesions round the stapes makes use of certain instruments similar to the needless of Dupuytren, with which he incises and cures around the base of the stapes, without its being necessary to disarticulate the incus or cut the stapedius.

In another word on the surgery of the middle ear Faraci concludes with regard to stapedectomy that it is an operation which, more than any other method of treatment, is crowned with the best acoustic and functional results, when performed on suitable cases. In order that the improvement which is obtained immediately after the operation should be preserved he recommends always to carry out resection of the tympanic ring. Stapedectomy is contra-indicated in otitis media hyperplastica with advanced lesions of the acoustic nerve, especially if the transmitting apparatus functions tolerably well; the removal of pressure on the labyrinth which follows on the stapedectomy renders the hearing and the tinnitus worse.

Having reviewed and criticised the opinions of others on intra-tympanic surgery in otitis media hyperplastica I will formulate some personal considerations from my own experience. As a rule if in sclerosis of the ear a lesion is in its first phases, and the acoustic disturbances complained of by the patient are not very grave it would be reprehensible not to try, before having recourse to surgery, a course of general treatment, combined with intra-tympanic injections, knowing besides that even in the pre-operative period in many cases this therapeutic line of treatment has arrested the progress of the disease and improved the hearing. We should bear in mind that it is

in the intrinsic character of the morbid process in the middle ear to be erratic. To remain quiescent for months or years and then resume its progress without any apparent cause. Hence a hasty recourse to surgical interference without bearing in mind the history of periods during which the disease is active, and without remembering that improvements had been secured by injection, might precipitate our opinion. If in many cases we did not obtain from intra-tympanic injections all those results which might be hoped it is because they have been carried out either with violence, or with too great frequency, or for too long a time, so that the favorable influence exercised by them on the mucous membrane of the stapes and the mechanism of the ossicles is succeeded by an intolerance of the organ from the abuse of this method.

It is not by any means intended to be inexorably declared that we should operate on whoever is affected with sclerosing otitis, especially if we are at the beginning of the illness, when often general and local clinical treatment will suffice to arrest the progress.

In cases of incipient sclerosis in individuals who are still young and robust it would be well, when we have to combat simply hyperplasia or proliferation of the mucous membrane, to try the action of thyroid tablets, taking two or three a day of thirty centigrams (five grains) each. They were first proposed by Vulpinus and confirmed in many cases by Bruhl. Or we might use the intra-tympanic injections of jequirity according to the method tried by De Rossi; or the injections of digestive ferments (the pepsin of the dog in the strength of one per 10,000) according to the methods recommended by Cohen Kysper, of Hamburg. Those cases of incipient sclerosis in the tympanum and Eustachian tube will be more susceptible of a general and local medical treatment when they are a consequence of an analogous process in the naso-pharyngeal space, not in those depending on a primary affection of the bony capsule of the labyrinth with early adhesions of the branches of the stapes.

One of the indications which sufficiently justifies surgical action is when the progressive form of sclerosis in one ear, already seriously compromised, we have to do with manifest symptoms of rapid advance of the morbid process in the other ear. The first to confirm the favorable influence on the function of hearing of the opposite ear, secondarily affected, was Urbanschitsch, and I have been able to confirm his opinion in several cases operated on by myself.

Naturally the first question put by the patient when an operation is proposed is the following: Is there a certainty or, at least, a great probability of curing my deafness? When our methods of ex-

amination have established that the tropho-neurosis has passed beyond the confines of the tympanic cavity, we must be very reserved with regard to the result of any surgical interference.

A considerable experience has taught me to interfere only in hyperplastic forms which are strictly limited to the middle ear, in which, in addition to other tests, we have the confirmation of a negative Rinne. Besides, surgical interference will be much more effective when the vertigo and paracusis, as well as the deafness, are insupportable to the patient. As was first noted by Urbanschitsch, in these cases the simple extraction of the malleus and of the incus is sufficient to arrest these symptoms and prevent further deterioration of hearing.

As a rule, if there is not deterioration of hearing, but the patients are afflicted with paracusis and vertigo, I limit my interference to extraction of the malleus and incus. It is only later on, and when the results of this operation have not proved efficacious, or have deteriorated, and the tinnitus and vertigo returns, or when there is a gradual loss of hearing, that I proceed to mobilization of the stapes, provided always that Rinne's test remains negative and that we must ascribe the deterioration of function to rigidity of the membranes of the oval and round windows. But when the patient has already, in addition to the paracusis, a decided diminution of hearing, I immediately perform temporary myringectomy. I separate the articulation of the long branch of the incus from the stapes and dislocate the former, carrying it away laterally. If able to detect the existence of false membranes around the branches, or the presence of effusions near the windows, I divide and destroy them. Eventually I divide the stapedius and mobilize the stapes by means of a probe with gum elastic extremity.

To speak frankly, however, I cannot produce any authoritative work which, with solid statistics, shows that, as a matter of fact, the mobilization of the stapes in pseudo-anchylosis of this ossicle in the niche of the oval window has brought about a permanent cure of acoustic disturbances. There are those who rather believe that, being an irritative operation, it might even aggravate the hyperplastic process in the tympanum (Grunert). If, therefore, the case requires surgical interference to diminish the acoustic disturbances associated with anchylosis of the stapes it will be preferable to perform a stapedectomy. Unfortunately the value of stapedectomy is open to discussion in so far as the results of our clinic are concerned. Hence I agree with the opinion of Politzer and Moure that the importance of the stapes is not very great and that it is not necessary to remove it, since in advanced cases of otitis media hyperplastica,

when the fixation of the stapes has already come to pass, it means that the alterations in the labyrinth and terminal nerve limits are already very serious. According to the researches of Politzer, the fixation of the stapes in such cases is produced by a new formation in the membranous labyrinth (in the capsule) of bony tissue which has invaded the plate of the stapes, so that its extraction (when successful) could not prevent the obliteration of the oval window.

Politzer expects greater success from extraction of the stapes in cases in which the fixation and rigidity depend on cicatrices and adhesions consequent on chronic suppuration in the middle ear and when the labyrinth and its capsule are intact. That the extraction of the stapes cannot bring about any permanent result in sclerosis of the tympanum was shown to me by the histological examination of the temporal bone of an old man on whom some years previously I had tried stapedectomy. In this case the sections I made, passing through the oval window, showed the niche to be completely altered by newly formed bony tissue, which had finished by soldering the plate of the stapes in parts to the margins of the fenestra.

Also Hartmann has communicated the results of his post-mortem researches on the temporal bone of two individuals afflicted with deafness almost completely dependent on bony bilateral ankylosis of the stapes (*Zwei neue Fälle von doppelseitiger Knöcherner stapesankylose*, *Zeitz f. Ohrenheilk.* xxxiii, 2.). He comes to the conclusion that therapeutics have proved so far powerless to combat the evolution of this disease.

Having then made a diagnosis of ankylosis of the stapes consecutive to hyperplastica otitis media, and having thought the case operable by stapedectomy (after an examination which has demonstrated that the internal ear is not yet affected), we should always make a most reserved prognosis on the result of the operation in so far as the improvement in hearing and the sensation of paracusis are concerned. Grunert has already given the warning in his excellent memoir on extraction of the stapes. Even in the usual cases, a number of circumstances may render the result fallacious, since it is not always easy to diagnose if the ankylosis is fibrous or bony if there exist pathological modifications in the oval window and if the internal ear has not already undergone incipient and progressive alteration. In any case, with regard to the functional results of stapedectomy, we should never let ourselves expect too much and never promise too much to our patients. We should rather say that with operative interference the subjective noises and vertigo will doubtless disappear, and so we will not compromise the character and the future of otology.

HISTORY AND DISCUSSION OF A CASE WITH MENIÈRE'S SYNDROME.*

BY HEBER N. HOOPLE, M.D., BROOKLYN, N. Y.

Surgeon, Eye Department, Williamsburg Hospital, Brooklyn, N. Y.; Clinical Assistant, New York Eye and Ear Infirmary; Ophthalmologist and Otologist, Methodist Episcopal Church Home, Brooklyn, N. Y.

F. P. comes of ancestors of nervous type. One dropped dead in church. One fell dead into a pool of water. His father was ill with asthma during the last twenty-five years of his life and died of fatty heart at sixty-four years. F. P. is twenty-six years old, has been married three years, is a sculptor, is robust and plethoric, weighing 160 pounds. Has decidedly nervous temperament. The mere mention of an operation on him, however slight, excites and unnerves him.

He noticed slight impairment of his hearing in the left ear before going to Chicago in 1892. He had had no illness nor disease of any kind (except sea-sickness) previous to a certain night in December, 1892, when he awoke feeling strange, so much so that he arose to light the gas: but before he could do it he fell suddenly and heavily to the floor, and immediately fell again on attempting to arise. He then crept to the head of the stairs to call for the help of the people below him, whom he had awakened by his fall. Vomiting followed.

Two weeks later, after sitting down with friends at a restaurant, he turned his head to the left to give his order when he was suddenly seized with giddiness. The room seemed moving topsy-turvy, and then he fell over, but did not lose consciousness. He called for water and drank it freely. He was taken to the office of a near-by physician. Vomiting and purging followed.

Lighter attacks than these came frequently like a shock proceeding from his body to his fingers and toes, often lasting but a few minutes and going as suddenly as they came. One such attack came upon him as he stood holding the railing of an Illinois Central Railroad car-platform. By having hold of the railing he saved himself from falling. The attacks were accompanied by nervousness, drawing his attention to the left ear.

The aurist consulted six months after his first fall made no diagnosis. Losing his position he returned to New York. One day, when the nervousness was very bad, he hastened along the street to

*Read before the Brooklyn Pathological Society, 1899.

reach a drug store a block away, catching the railing along the sidewalk as he went to keep himself from swaying. Reaching a boot-black's chair he sat down, immediately vomited and fell over against the railing beside it. Still conscious, he requested to be taken somewhere to rest awhile, and was taken to Bellevue Hospital and put over night with the D. T. patients. Next day they gave him two dispensary cards, one for an acne on his shoulders (which came out on him with each severe attack), and one marked "epilepsy." Dr. A. advised abstinence from alcohol and excitement and high living, which he found easy to comply with, being out of work and obliged to live on scanty fare. In one month he recovered completely, and went to work in December, 1893. He had no further attacks for five years.

In June, 1898, distinct buzzing began to affect his left ear. In October another seizure came upon him gradually in his office in New York, commencing with dizziness and ending with a fall, vomiting, purging and temporary cessation of the tinnitus.

One month later he suddenly fell from the sidewalk in front of his house into water lying in the gutter. On neither of these occasions did he lose consciousness.

The tinnitus became more disturbing as time went on, especially in the quiet of the evenings and away from the noise of the busy streets. At times it was a rushing sound like that of running water, then it would suddenly change, "as if something had been shut off" in his ear, and it would become like the noise of an elevated train overhead.

The usual forms of this vertigo were a swaying in his walk and a misjudging of distance, making him plant his foot too soon or not soon enough. He said that if in walking he appeared to others as awkward as he did to himself he must attract considerable attention. When lying down in bed he would seem to go too fast and reach the bed too soon, reaching it with a horrible sinking feeling, which continued to press him down as if it would push him through the bed. When he fell in the severer attacks, the sense of sinking was even worse, as if he were being pushed into the earth. When the dizziness, nervousness and tinnitus were worst he could not hear well with the left ear. Besides, he had a feeling of fixed stare, as if he dared not turn his eyes quickly for fear of falling or swaying.

With this history he consulted me on the third of January, 1899. Heart and lungs and kidneys functioning normally. Vision acute, fundus oculi normal and media clear. No history of pain in, or discharge from, either ear. Both meati normal. Tympanic membrane in both ears presented exactly the same appearance, luster, light-reflex, color and translucency almost normal, the long process of the

incus being clearly seen in both ears, and there being but slight, if any, retraction of the membranes or rotation of the malleus. The right Eustachian tube was slightly more patent than the left, but both opened easily for Politzerization and catheterization. The right naris was normal except in a slight deflection of the septum to the left. The left, besides receiving the deflection, had a long, wide shelving exostosis, not occluding the naris, but easily permitting catheterization of left tube. Schneiderian and naso-pharyngeal mucous membranes familiarly congested, but not extravagantly so. No excess of Luschka's gland. Slight excess of faucial tonsils.

FUNCTIONAL EXAMINATION.

	Watch.	Whisper.	Speech.	Galton's Whistle.	Weber.		
a. d.	$\frac{90}{120}$	40'	43'	1	=		
a. s.	$\frac{18}{120}$	10'	2'	1	=		
SCHWABACH	Rinné	A. C.	A. C.	A. C.	A. C.	A. C.	
	a. d.	A. C.	25"	20"	31"	23"	19"
		B. C.	15"	10"	12"	5"	7"
			C	C ₁	C ₂	C ₃	C ₄
		A. C.	0"	0"	15"	6"	13"
	a. s.	B. C.	7"	7"	8"	3"	7"
		Rinné	B. C.	B. C.	A. C.	A. C.	A. C.

After inflation a. d. was the same; a. s. gained 1' for watch, 2' for whisper and S' for speech. The C₁ fork, not heard before, was now heard 2" by A. C. and the C₂ fork was heard 7" longer by A. C.

Three days later watch a. s. was heard at 6", though tinnitus was then absent.

An average of three T. F. tests made during next three months gave the following for

a. s.	{	C.	C ₁	C ₂	C ₃	C ₄
		A. C.	6	10	24	16
		B. C.	8	9	16	7

showing very considerable improvement in A. C. and slight improvement in B. C. Watch heard further away by a. d. was not heard further by a. s.

At an examination made April 30th, everything previously gained had been lost and the patient was virtually back where he was four months before. The watch a. s. was heard at 4", A. C. was again lost for C and C₁, and all the distressing symptoms had returned.

a. s	{	C.	C ₁	C ₂	C ₃	C ₄
		A. C.	0	0	16	12
		B. C.	10	8	15	8
						5

The patient had opposed removal of the shelf from the septum nasi, so that nothing radical had been done. His treatment consisted essentially of a strychnine tonic and gr. xx. KBr., each night. Since then previous improvement has been partially regained.

I have spoken of the case as one with *Menière's Syndrome*. Pritchard would style it *Menière's symptoms* when the primary lesion is outside of the internal ear. It is otherwise styled *Menière's symptom-group*, or *Menière's complex* (or symptom-complex). Gustav Brunner would prefer to call it *vertigo Menière*. Dundas Grant would speak of it as a case of *pseudo-Menière disease*, for he cites Gradenigo and Gellé as authority for stating that "in the sclerotic form of non-suppurative otitis media, attacking the stapedio-vestibular articulation, the attacks may be typical of Menière's disease."¹ I would say that we have here a case of chronic non-suppurative middle-ear disease, attended with involvement of the labyrinth, or, in other words, a case of mixed disease, with vertigo, exaggerated to an unusual degree, simulating the apoplectiform condition found in true Menière's disease, (this term being, by common consent of most recent authorities, used only for cases with typical symptoms of apoplectiform labyrinthine vertigo. Some even would restrict it to effusion into the labyrinth with the characteristic symptoms).

The distinctive features of the case are:

1. No loss of consciousness, no convulsions nor any other signs of epilepsy, to leave room for doubt as to proper exclusion of that disease.
2. Vertigo occasionally apoplectiform.
3. Absence in the first attacks of marked tinnitus; its presence as a marked feature subsequently.
4. Unusual absence of tympanic marks of o. m. e. c.
5. Prominence of the neurotic hyperexcitability of temperament.
6. Presence of vertiginous aura.
7. Association of deafness for both low and high tones with improvement in both; subsequent loss for former without loss of latter.

French writers, notably Gilles de la Tourette², would look upon this as a true case of Menière's disease. They claim preservation of consciousness as a necessary feature of the disease, whereas German writers describe cases with loss of consciousness, thus possibly including cases of epilepsy. In all of Gellé's cases, but two, Menière's and Gruber's, had hemorrhage into the labyrinth. Again, Bonnier associates arterio-sclerosis with sclerosis of the middle ear and holds that the former increases "the intraglomerular and intra-

labyrinthine tension'' and that subjects of Bright's disease are more likely than others to be attacked with Menière's disease. One of Barr's cases supports this contention.³ Further, the vertiginous sign of hyperexcitability of the labyrinth, is to be emphasized more than deafness, because deafness in labyrinthine disease is often unassociated with vertigo. This emphasis on irritability of the labyrinth is pointed out by Gustav Brunner⁴, who states that the vertigo *Minière* is not due to a condition of atrophy or paralysis but to one of *irritation in the semicircular canals*. Thos. Barr agrees with this⁵. This is also the clinical importance of the case of Moos⁶, in which the vertigo *Minière* continued so long as the caries of the semicircular canals lasted, whose final destruction and removal ended the irritation and with it the vertigo *Minière*. And Gille de la Tourette's expression, "hyperirritability of the labyrinth," means that the semicircular canals are the seat of undue irritation to the cerebellum causing perception of vertigo.

It would seem to me then, that, inasmuch as the French gave us the first recognition and description of the disease and have, in Charcot, Gellé and Andre Thomas and others, continued to be in the forefront in logical and scientific study of the pathology involved, they are entitled to first place on final opinions concerning it.

From my own limited study of the literature, it would seem to me that the association of vertigo with deafness (and perhaps tinnitus) constitutes the *ensemble* whose pathological cause is determinative in the disease. I would see in all cases in which they occurred together such pathological factors at work as would by their combined effect, bring about a state of "hyperirritability of the labyrinth." And I would think of this state as consisting in *high tension* of the intralabyrinthine fluids, producing upon the organ of Corti that effect in loss of function which like pressure or tension in glaucoma produces on the rods and cones of the retina. That the association of deafness and vertigo is not constant, may be due to differences of susceptibility to irritation between the cochlear and vestibular nerves.

The high tension, in the nature of things, must coexist simultaneously in both divisions of the labyrinth and could be brought about in various ways:

1. From exudation, as in inflammation of the labyrinthine vessels. Such cases would be furnished by diatheses with sclerotic arteries—Bright's disease, gout, syphilis, meningitis, etc.
2. From partial occlusion of the lymph channels, as conceived by Gustav Brunner in analogy to glaucoma (l. c.).
3. From hemorrhage, as in *Minière's* and Gruber's cases.

4. From impairment of motility of the oval and round windows, as in chronic middle ear catarrh.

5. From peculiar susceptibilities in the mechanism of the sympathetic nervous control—reflex neurosis.

Thus a high tension of endolymph that would destroy or impair hearing function in the organ of Corti would naturally be supposed to do harm of a like character to the function of the semicircular canals. But in the latter the function concerns equilibration and is brought about by transmission of influence through the vestibular nerve to the cerebellum. When tension is normal, the influence secures normal function, *i. e.*, the endolymph of the semicircular canals preserves equilibrium (if we admit the correctness of Goltz's hypothesis of the pressure-function): when tension is high, the influence is an irritation provoking giddiness. A common condition of tension explains involvement of both functions—loss, or impairment, of the senses of hearing and equilibration.

In support of this line of thought are the following:

1. All the clinical facts can be adjusted to it.

2. Transient vertigo with slight deafness find a ready explanation in mild cases from the side of the reflex-neuroses. This view has been well worked out by Gustav Brunner in his case,⁷ and is supported by the case of Politzer cited in his text-book (p. 832), a case of angio-neurotic paresis of the acoustic nerve which he successfully treated by galvanization of the cervical sympathetic. The mechanism of this cure must be apparent to all, the sympathetic containing as it does the nerves of vaso-motor control and thus of blood supply everywhere, and including in this case the labyrinth. An uncontrolled blood supply would permit of habitual high tension of fluids of the labyrinth, especially if it were associated with simultaneous narrowing of the lymph channels of escape, or impairment of mobility of the oval or round windows.

3. The theory is further supported by the clinical behavior of quinine in most of these cases. When given after the manner of Charcot in large doses for a long period, the effect, as Hans Brunner with Horner demonstrated, is to cause ischemia of the blood vessels. Gustav Brunner states that this effect is brought about through the paralyzing action of quinine in large doses on the heart. It appears to me that this is unsound and would better be attributed to some selective effect of the drug on the vaso-motor mechanism causing constriction of the arterioles, especially when these are in the system of end-arteries. Horner found the retinal arteries of a patient, blind for four days from excess of quinine, reduced to fine lines and some

of them even obliterated. Similar action on the arteries of the labyrinth would ultimately obliterate them, at one and the same time destroying vertigo and producing deafness.

4. The fact that many observers, notably W. Posthumous Meyjes,⁸ of Amsterdam, and Thomas Barr, of Glasgow,⁹ have found cases of Menière's symptoms associated with nasal obstruction, favors this hypothesis.

5. The nervous temperament of my own patient favors a reflex neurosis from his septal exostosis conceivable as selecting the portion of the sympathetic controlling the blood supply of the labyrinth, in this resembling the case of Gustav Brunner¹⁰.

6. The vertiginous aura preceding this patient's fall and other severer symptoms, also favors the sympathetic involvement.

If this putting of the case is reasonable (and it seems already to have many facts and authorities in support of it), then I see no good anatomico-pathological basis for separating cases into *mild* and *severe*, as does Gustav Brunner. For, as I have shown above, all forms and types would have the common pathological factor of disturbed intra-labyrinthine tension.

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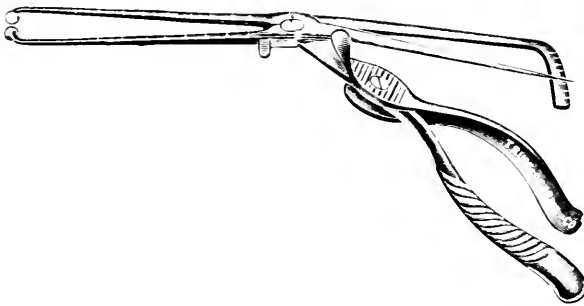
A NEW NASAL SEPTOMETER.

BY EDWIN PYNCHON, M.D., CHICAGO.

Professor of Rhino-Laryngology and Otology, Chicago Eye, Ear, Nose and Throat College

At times, in order to operate intelligently upon the nasal septum, it is desirable to be able to accurately determine its thickness at different points, particularly in cases wherein nasal stenosis is due to projections from the septum when some deflection is an additional complication. In such cases the operator, with the assistance of a septometer, can more accurately decide just how much of a projection can be safely removed without danger of perforation.

While a fair estimate can be made as to the thickness of the septum anterior to the crest of the greatest prominence, by the eyesight alone, it is an entirely different matter when the thickness of the septum posterior to that point is to be ascertained. It is in such cases particularly wherein the septometer is invaluable. The desirability of a device of this nature has been previously appreciated, and attempts have been made to fill the want. The latest pattern of Seiler's septometer is the form which has been most popular, though in its use certain disadvantages are encountered which I have endeavored to overcome in the device herewith shown.



Nasal Septometer.

In this instrument two non-crossing arms, each about six inches in length, are pivoted at their exact centers so the motion of the pointed or index finger of one blade upon the graduated scale on the other blade will at all times show precisely the distance between the opposite or distal ends of the tapering arms, which bend inwardly, and terminate in bulbous points with flattened inner faces.

The upper surfaces of the distal half of these arms are graduated so that the distance of insertion within the nostrils may be noted, though the artist has failed to show the same. When in use the distal ends of the arms are caused to lightly press against either side of the septum by a small and slight spiral spring placed beneath the arms just forward of the joint. Of course when being used it will be conjointly with a nasal speculum, so the different points measured can be simultaneously inspected. The handle part of this instrument is patterned after the handles of a nasal speculum which I have for some time been using. The spiral spring which causes the measuring arms to approximate also keeps the handles apart, hence by compressing the handles the measuring arms are separated, which is the method of manipulation.

When resting upon the operating table the two separated handles at one end, and the closed points of the measuring arms at the other end, constitute a tripod support so the instrument may be more easily grasped by the operator's hand. At the point where the handles are pivoted a flattened corrugated surface both above and below is provided, whereby the instrument may be lightly held between the thumb and index finger.

After the measuring arms have been introduced, respectively one in either nostril, there is but little requirement for compression of the handles as, between the weakness of the spring and the flatness of the bulbous points, the arms will automatically work as the instrument is carried forward and backward over the prominences and depressions. As the proximal ends of the measuring arms are bent downward from the pivot they are below the range of sight so the view is unobstructed.

This instrument has been neatly constructed for me by Messrs. Truax, Greene & Co., of Chicago. In my opinion the illustration does not show the instrument to be quite as light and delicate as it really is.

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A NEW METHOD OF INFLATING THE MIDDLE EAR AND TREATING THE DISEASES RELATING THERETO.

In a recent issue of the *North Carolina Medical Journal* (October 20, 1899) a method of treating ear diseases is described, for which the author, Dr. Lucien Lofton, of Norfolk, Va., holds out great promise.

The instrument used is a stethoscope such as the one devised by Lewis Snofton, with the chest receiver detached. In its stead, a hard rubber mouth piece is substituted, the latter being held gently but firmly between the lips of the patient, while the ear attachments are applied to the ears. Suction is then made by the patient and

rapidly repeated so that the drum is caused to "vibrate." The effect may be limited to one ear by squeezing the tube leading to the other ear. The author believes the method superior to the Valsava method, catheterization, etc., and refers to a number of cases cured by its application.

This method of manipulating the tympanic membrane is certainly not new, the novelty consisting simply in the use of the stethoscope for this purpose. A point evidently overlooked by the author is the different effects obtained according to whether the soft palate is brought into play or otherwise. If this is raised, thus cutting off the naso-pharyngeal cavity, suction simply draws the drum forward, if not fixed by adhesions or anchyloses, and the middle ear is not "inflated." If the velum is relaxed and the nostrils closed, the middle ear shares in the rarification process, which would counteract this effect in the auricular canal and prevent the mobilization of the drum.

In the same manner, increasing the pressure in the stethoscope would be influenced by the position of the soft palate. If the naso-pharynx were cut off by this, blowing into the instrument would tend to drive the drum in, if this were possible as already explained, but there would be no "inflation" of the middle ear. If, however, the naso-pharynx participated in the process, the increased pressure in the middle ear would counteract the effects of the external pressure.

Even if the effects on the drum were all that is claimed for it, this is still a subject concerning which reliable authorities differ. It is claimed by those opposed to this method, that the effects on the tympanic membrane is limited to the parts which are not fixed by adhesions or anchyloses, and that the portions for which the mobilization is required are not influenced by the process. That it has some advantages in the hands of the experienced aurist, however, must be conceded, but it would certainly be unwise to use it indiscriminately in all cases of acute and chronic ear diseases as recommended, and especially when applied by means of an apparatus which is not fully under the control of the operator, and in which the effects cannot be carefully watched as in the instrument already used for this purpose.

SCHEPPREGRELL.

SOCIETY PROCEEDINGS.

SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

(Continued from Page 318.)

Rheumatic Diseases of the Ear.

V. UCHERMANN (Christiania): Rheumatic diseases of the ear are but little known and seem to be rare. The symptoms are apparently not sufficiently distinct, nor the etiology so clear as to establish a safe conclusion with regard to cause and effect. Still, I am of opinion that a closer investigation of the matter will enable us to recognize certain common features, symptomatic and pathological, by which a clinical diagnosis of the special cases can be made or rectified. To attempt this, and at the same time to draw the attention of my colleagues to an interesting group of ear diseases as yet little known, is the aim of this paper. At the out-set we are met with the old difficulty, What is rheumatism? The answer from an etiological point of view appears to be more unsatisfactory than ever. Infection admitted, is it a specific infectious disease, or is it only a kind of pyemia dependent upon one or more pyogenic bacteria? Whatever the case may be, we have the clinical picture, which cannot be dispensed with. As we are well aware, the characteristics of the disease are—its tendency to attack the connective tissue (fibrous or muscular) and its endothelial-lined cavities, and to form fibrinous exudates and infiltrates. In this way it appears in the joints, muscles, heart, skin, etc. In addition to this there is its painfulness in certain localities, also it being acted upon by salicylic acid in acute forms, by atmospheric changes in chronic forms. It is necessary to set aside all cases whose only claim to being rheumatic is that they appear to have arisen after a rheuma—that is, a cold or catarrh. To this class belong, for instance, many of the so-called rheumatic cases mentioned by Gradenigo in his labyrinth diseases (Schwartz's Handbook). It is also necessary to differentiate between acute and chronic forms. Among the former the best known are the polyarthritis acuta (rheumatic fever), acute muscular rheumatism and erythema nodosum; among the latter, the chronic rheumatic muscular and joint diseases. All the rheumatic ear affections that have up to the present been described belong to the acute forms of rheumatism appearing as complications of rheumatic fever. Ménière (*Revue*

Mens. d' Otologie et Laryngologie, November, 1883) mentions a case where otalgia, in the form of severe intermittent pain, preceded by four days the attack of ordinary acute polyarthritis. A similar case is given by Wolff (*Verhandl. der Otiatrischen Section der Wiesbadener Naturforscher Versammlung*, 1887), who also adds that the joints of the ossicles can be affected. The clinical or pathological proof, however, is not given. In both cases the appearance of the drum does not seem to have been altered. Moos has observed a case of apoplectiform (Ménière) deafness during the period of convalescence after acute rheumatic fever, complicated with endocarditis (perhaps embolic). In a second case various cerebral hyperæsthetic symptoms appeared with attacks of pain and hyperacusis in the eighth and ninth weeks, hardness of hearing ending in total deafness (Schwartz's Handbook, tome i, p. 544). Among the deaf-mutes in Norway is a case where an examination of the ear points to the existence of a combined middle-ear and labyrinth affection caused by this disease (Uchermann. "The Deaf-Mutes in Norway." vol. i. p. 446).

I have seen two cases where ear affection preceded ordinary rheumatic fever. Both cases were of adults; one a lady of twenty-five years of age, who had had rheumatic fever several times before, the other a gentleman of thirty-five, of very rheumatic disposition. In both cases there was an acute inflammation of the middle ear, with marked injection of the drum, abundant secretion of serous or sero-fibrinous fluid, together with quite an unusual amount of pain, both spontaneous and when touched, which continued even after the opening of the drum. In the case of the lady, during the fourteen days before the beginning of the fever, an infiltrate formed on the posterior wall of the bony meatus, involving the adjacent parts of the drum, of the size of half a pea, red and very sensitive. In the man's case there was a swelling of the posterior part of the drum, also a more diffuse swelling and sensitiveness of the septum cartilagineum nasi on the same side, with superficial (catarrhal) erosions. In both cases the ear affections healed after eight days with the beginning of rheumatic fever, possibly the result of paracentesis and salicylic acid, though the swelling of the septum did not disappear for several months, and caused considerable impediment to the nasal respiration.

But there are also other cases where the rheumatism from which the ear affection arises is of a chronic character, and where the ear disease itself runs a course less acute and violent, but sometimes for the organ itself more fatal. In the case of a young man about

thirty, with a marked rheumatic history, I have seen without any apparent cause, and alternating with rheumatic affections of the throat, a bilateral, so called, otitis media serosa, that is, a collection of serous or sero-fibrinous yellowish fluid in the tympanic cavity, with the slightest inflammatory signs. The case ran a slow course, but finally yielded to repeated incisions of the drum. I venture the hypothesis that many of the cases of serous middle ear affections, especially those marked by yellowish or amber-colored exudate, are rheumatic in origin or foundation, and that treatment with salicylic acid should be tried before any surgical intervention is resorted to. In another case, that of a young, plethoric man about thirty-four, the symptoms when I first saw him (February, 1895) were the following: he complained that for a year he had suffered from tinnitus aurium and deafness of progressive character, which latterly had greatly increased. He experienced no dizziness, and hitherto he had enjoyed good hearing and freedom from ear-troubles. Occasionally he had felt rheumatic pains, but otherwise had never had a disease of any consequence. On examination the right drum revealed a small round cicatrix (as big as a shot): in the upper and hindmost quadrant there was a little dullness, but no retraction, the left drum being also dull and not retracted. Both the drums were movable by Delstanche. By auscultation the left ostium tubæ Eustachii was found narrower than the right, otherwise nothing was abnormal. From the left ear the hearing of speech was gone. He could neither hear No. 64 of Appun's set of tuning-forks (64 double vibrations in a second) nor Galton's whistle. Rinne was $-5''$, Schwabach much shortened ($-$). On the right ear Rinne was $-5''$, Schwabach was $-$. The deeper tuning-forks were heard more distinctly than the higher, the Galton not at all. On this side he heard words spoken in a loud voice at a distance of from three to four inches. In spite of internal treatment with salicylic acid and iodide of potassium, together with local treatment (leeches, injections of iodide of potassium and pilocarpine, massage (Lucae, Delstanche)—after a couple of months he was completely deaf. At his repeated request at last I tried a stapedectomy on the left ear. On probing, the stapes at first gave the impression of immobility, but by traction became loosened, and then was immediately replaced. The only result was considerable giddiness for a month, during which time he had to lie quite still on his back. At the same time he had rheumatic pains in the right shoulder. About a year later there appeared a reddish, fluctuating swelling of the left eyebrow and upper eyelid, with its seat in the periosteal tissue. By incision I removed about a tea-

spoonful of sero-fibrinous fluid, upon which the swelling disappeared. A year after, however, it reappeared in nearly the same place, and yielded to the same treatment. On this occasion there was also a swelling over the left tuberositas frontalis. Last year he called on me for a nose affection. There was a dry catarrh of the anterior part, with a formation of crusts and a dry perforation of the cartilaginous septum of considerable size. It had developed since the last time I had seen him, and proved very stubborn under the ordinary treatment. In connection with this case I might mention two similar affections of the nose that have come under my notice: one the case of an elderly man, very rheumatic, who eventually died of rheumatism (articular, etc.), owing to general exhaustion. The other case now under my treatment, where there is no perforation, but the pale, swollen mucous membrane is specked with white fibrous (sclerotic) spots.

It is then a case of what is commonly called secondary sclerosis, with involvement of both the labyrinthean bony capsule and the nervous elements. The history of the case and its accompanying symptoms make it fairly certain that it is of rheumatic nature, and, like the affections elsewhere, bound to the connective tissue. For instance, a swelling of the lining of the canalicula for the N. cochlearis and the lining of the vestibulum, with the result of more or less fixation of the stapes, will easily account for the acoustic phenomena. While with regard to the bone (labyrinth capsule) the result may be an eburnation (though with the preservation of the greater cavities—vestibulum, scale, etc.), or may be, in some cases, the apparent reverse, a rarefaction ("spongiosirung," Siebenmann). To sum up:

1. Rheumatic fever is sometimes preceded, sometimes accompanied, by otalgia, alone or together with an acute swelling and injection of the drum and the adjacent bony meatus, followed by a serous or sero-fibrinous secretion of the middle ear (otalgia, myringitis, otitis externa, otitis media *rheumatica*), or it may be complicated during its progress with affections of the middle ear and the internal ear (labyrinth, perhaps the auditory nerve).
2. There are other more independent rheumatic ear diseases with persons of a rheumatic constitution or tendency (previous rheumatic fever, etc.). The ear affection appears as an otitis media serosa with yellowish, half-brinous exudate, or as a (secondary) sclerosis with progressive character.
3. The characteristics of the different forms are: In the *acute* forms—painfulness, excessive injection, and the tendency to the

formation of fibrinous exudates. In the *chronic* forms—the tendency to the formation of fibrinous exudates, and the tendency to affect the bony capsule, with severe tinnitus and slow but steady progression. Salicylic acid seems to influence the acute forms but not the chronic. These latter, judging from the experience of a case at present under my treatment, are perhaps more influenced by a general rheumatic treatment.

In the discussion which followed Dr. HARTMANN said: The paper of Dr. Uchermann reminds me of one patient who probably comes in this line. A man slept one very cold and wet night in the woods: when he awoke he found he had completely lost his hearing.

Dr. UCHERMANN, closing the discussion, said: It is possible that Dr. Hartmann's case comes in this line, but we will have to differentiate between acute catarrhal inflammation of the ear and rheumatic inflammation of the middle ear. One is easily accessible to treatment with salicylic acid, the other is not. Furthermore, in rheumatic cases we always find other manifestations of rheumatism: exceptionally, rheumatic otitis shows infiltration and exudation in the ear alone.

Therapy of the Tympanic Mucous Membrane — GOLDSTEIN (St. Louis):

The author advocates conservatism in the treatment of chronic middle-ear affections. Mastoid and intra-tympanic operations are frequently undertaken where patience and care in the application of less radical measures are available.

An interesting bacteriological point was discussed in that micro-organisms can be harbored within the confines of the middle-ear cavity for so long a time without giving rise to a further extension of the inflammatory process. Suppurations of the middle ear are frequently found which have existed for years without much indication of tissue destruction, or disturbances to the patient. Micro-organisms find an especially favorable habitat on mucous membrane, and this suitable culture medium, supplemented by the moist serous surface and fairly uniform temperature of the tympanic cavity afford the best possible opportunity for the rapid spread from an infected focus. Over 70 per cent of suppurative affections of the tympanic cavity are due to an extension and infection from the naso-pharynx through the Eustachian tube. Through this portion of the mucous tract and extension to the tympanic cavity is rapid: conversely, in chronic suppurative infections of the middle ear an extension to the attic, antrum and mastoid is slow. It will be interesting to determine the reason for this decided difference of the same micro-

organism to spread; on the one hand the rapid spread through the naso-pharynx via Eustachian tube to the tympanic cavity; on the other the slow progress from the tympanic cavity via attic and antrum to the mastoid cells.

Preference is given to the "dry treatment" in suppurative otitis media, and the promiscuous use of the syringe decried. Numerous reasons and opinions are advanced in setting forth the disadvantages of the frequent use of the syringe and lavage, and the author concludes with the claim that this form of treatment is contra-indicated in active suppurative cases where large perforations of the membrana tympani exist, and where free entrance of the syringing fluid into the tympanic cavity is so easily effected. The statement is offered that many of the cases requiring mastoid interference or ossiculectomy have been unconsciously produced by the too liberal use of the syringe in cleansing the tympanic cavity.

The indiscriminate use of the nasal douche, especially when handled by the patient himself, is commented upon and subsequent infection of the tympanic cavity as the result of this procedure is pointed out.

The Eustachian catheter is liberally used in connection with a nebulizing or vaporizing apparatus in chronic suppurative otitis media to accomplish the three-fold purpose of inflating the middle-ear cavity, of clearing the tympanum of pus and of medicating the middle-ear cavity from within.

Inflation of the middle-ear cavity is accomplished by a steady current of air, continued five minutes at a time, in conjunction with a nebulizing apparatus and Eustachian catheter. Long standing cases of suppurative otitis media have yielded to this treatment where all other methods have failed.

Where the discharge is profuse, the above method of treatment is supplemented by a gauze packing, selecting narrow strips of plain sterilized gauze for this purpose.

Medicated liquid petroleums are extolled in the treatment of chronic non-suppurative catarrh of the hypertrophic form and have even been found of therapeutic advantage in mild sclerotic otitis media.

A special feature of this paper is the intra-tympanic injections of medicated liquid petroleums. Applications to the tympanic cavity are made as follows: A short hard rubber Eustachian catheter is introduced in the usual manner and snugly fitted into the naso-pharyngeal orifice of the Eustachian tube, the tight fit being necessary to avoid leakage at the tip of the catheter when the fluid is forced into the tympanic cavity. A glass-barrel syringe, two inches in length

and one-half inch in diameter, supplied with a cone-shaped tip is tightly applied to the distal end of the catheter. The syringe is loaded with a solution containing iodine, 3 grains, carbolic acid, 4 grains, benzoinol or albolene, 1 ounce. When the catheter and syringe are properly adjusted, the patient's head is tilted well backward and inclined toward the ear to be medicated. The piston is pressed home slowly, and in the majority of cases, after six or eight drops have been delivered, the patient will state that he feels an unusual fullness in the ear. The syringe is then adjusted to the cone-shaped tip of the compressed air apparatus: a few short taps, and then a steady pressure continued for eight or ten seconds is given. This insures the penetration of the tympanic cavity by the fluid.

The above technique is applied either alone or in conjunction with some form of pneumatic massage of the membrana tympani.

The value of pneumatic massage in selected cases is emphasized.

LEDERMAN (New York) endorsed the remarks of Dr. Goldstein and desired to emphasize the importance of treating pathological lesions in the nose and naso-pharynx in cases of chronic middle-ear catarrh. It had been his custom for the last few years to treat the mucous membrane of the Eustachian tube in a similar manner as practiced upon that of the nose and naso-pharynx. The intimate association of these cavities was readily seen in cases of acute otitis following catarrhal conditions of the nose and post-nasal space. Suitable aeration of the tube and middle ear were important factors in the treatment of these cases. For this reason obstructions of the nose or naso-pharynx should first be looked to. After these passages were free applications in suitable strength might be made to the tubes and middle ear. It was always advisable to begin with solutions—iodine in combination with menthol about five grains of the former to ten of the latter to the ounce of any oily menstrum, preferably benzoinol. This had acted satisfactorily in his hands. In suppurative conditions cleanliness played a very important part.

BALLENGER (Chicago) protested against the inference that existing hypertrophy of the mucosa of the middle ear or nose could be materially reduced by the topical application of vapors or oily emulsions as described. When hypertrophy was present there was permanent thickening of the tissue and it could only be removed by caustic or surgical measures. The value of topical measures to true hypertrophy was limited to their influence upon the vascular and lymphatic circulation. In this way the local processes might be so modified as to reduce the vascular engorgement and to accelerate the lymphatic flow, thereby establishing a better absorption process in the mucosa.

On the Extraction of the Stapes, with Demonstrations of Histological Preparations — POLITZER (Vienna).

The simple mobilization of the stapes had only a temporary effect on the hearing. Where the improvement was more lasting it was due to a tearing of the adhesions. Better results were obtained by dividing the adhesions formed between the branches of the stapes and the walls of the niche of the fenestra ovalis. The operation of the extraction of the stapes was founded on an experiment with animals. It had been found that in birds and rabbits, after the extraction of the stapes, a new membrane was formed, closing again the fen. ovalis. His own experiments on rabbits confirmed this fact, and, in addition, he found by microscopical examination that no pathological changes were produced in the labyrinth. The operative extraction of the stapes in cases of the so-called sclerosis of the middle ear was, according to his experience, of no use, because his investigations had shown that the cause of the fixation of the stapes was a proliferation of bony tissue of the labyrinth, which even after removal of the stapes eventually closed up the fenestra ovalis.

The results of the extraction of the stapes in cases of non-suppurative middle-ear catarrh with formation of adhesions were still too few for us to form a definite opinion of its value. In cases of chronic middle-ear suppuration a good number of observations had been made. The histological examination of microscopical sections showed the following: On sections which passed through the niche of the fen. ovalis and vestibulum one saw the inner wall of the tympanic cavity covered by a granulated mucous membrane composed of round cells. This same granulation mass filled the niche of the fenestra ovalis, and, passing forward from there through the labyrinth window into the vestibulum, filled out the whole cisterna perilymphatica. This granulative tissue was firmly fixed with the utricle and surrounded it on all sides. The wall of the utricle itself showed inflammatory thickening. In the horizontal semicircular canal the connective tissue network was in a state of inflammatory infiltration invaded by round cells and intersected by dilated vessels.

More conspicuous changes were found in the cochlea. Here the inflammatory proliferations had entered both cochlea turns, reaching as far as the top, principally, however, in the scala tympana. It started mostly from the invagination of the cochlear canal and from the lamina spiralis and showed the same structure as the connective tissue proliferation in the vestibulum. Where the stapes had been removed either intentionally or accidentally during the performance of the

radical operation, even when the immediate results had been favorable, still little was known about the ultimate results.

Tarse was of the opinion that the extraction of the stapes might be performed without danger to the hearing. But against the number of cases where the hearing was improved must be placed a series of cases in which it was destroyed. Prof. Politzer then cited a case which had come under his observation. This case, the first in which the labyrinth was histologically examined after the extraction of the stapes, was very important in securing the indication for the operative removal of the stapes. During the course of suppurative otitis media it showed the possibility of a spreading of the inflammation into the labyrinth, and might possibly be given as the explanation why the hearing was impaired after the extraction of the stapes. He for one, therefore, was against the performing of this operation during the course of chronic suppuration of the middle ear. But when the suppuration had passed, and there were adhesions between the branches of the stapes and the niche of the fenestra ovalis, there was, he thought, a distinct future for the operative extraction of the stapes with a view to improving the hearing. This opinion was based upon observations made by others and also upon a case which he had under his notice.

On the Curability of Hitherto Incurable Deafness by Means of Vibratory Massage of the Conducting Apparatus—OSTMANN (Marburg).

(This paper will appear in full in a subsequent issue of THE LARYNGOSCOPE.)

F. COHN (New York) said he had used the massage apparatus for three years. When he first received it he was hopeful that it was going to help him in improving the hearing. When he had used it several months he became less hopeful, but he hoped that it might assist him in tinnitus. But after three years' conscientious use he could not say that he had been helped any. He was now speaking of the electrical vibration massage. He found that the noise stopped for a few minutes, but was resumed in ten minutes or so. He thought he had received better results with the Delstanche apparatus. It was true he had not used it like Prof. Ostmann for twenty-five minutes. But, on the whole, he did not see any benefit from electrical vibration massage.

DUNDAS GRANT: Within the last year and a half he had employed another method of massage which he had the honor of describing before the German Otological Association. The mode of

vibration was a mechanical one and the patient felt it shaking up to the interior of the ear. He thought this method of treatment would be beneficial in all those cases of patients who heard better in the midst of a noise, but he had found it did not answer in all. There had been just a sufficient number of cases, however, considerably improved as regards their hearing and relief sometimes completely of the tinnitus to encourage him to try the method of mechanical vibration before telling the patient that nothing could be done. In some cases the results had been singularly gratifying, while it was in only a comparatively small number of cases that benefit had accrued in a disease like progressive deafness, where everything else left them so much in the lurch, the method he had indicated ought not to be wholly neglected.

GOLDSTEIN (St. Louis) expressed himself in favor of massage whether by the original method of Delstanche or by one of the various forms of mechanical devices. He did not agree with Prof. Ostmann on the length of time. In his paper he (the speaker) touched on the injection of oily preparations into the tympanic cavity just prior to the massage. He believed that the presence of these oily medications in the tympanum softened the adhesions and in that way brought about more effective results.

SCATLIFF (Brighton) was understood to express himself favorably to massage.

PROF. OSTMANN closed the discussion.

The Pneumatic Treatment of Diseases of the Ear—G. NUVOLE (Rome).

(This paper will appear in full in a subsequent issue of THE LARYNGOSCOPE.)

Twentieth Century Prognosis in Chronic Catarrhal Deafness—SARGEANT F. SNOW (Syracuse).

The apathy of the medical profession regarding so-called chronic catarrhal deafness, the woeful resignation of the afflicted and the improved facility for combating this disease impelled him to ask a few moments indulgence. For many years the chronic type of this affection baffled the skill of foremost otologists and gradually it took a place in the list of non-preventable and incurable maladies. Even now it did not seem safe to assume that those almost totally deaf could be improved, but they must admit that the recent advances had changed their prognosis in other conditions. Why not in the great body of chronic catarrhal cases, where for instance words in a forced whisper could still be heard ten inches or better. Of late they had been led

to expect too much from purely nasal operative work when with 80 per cent of such cases recurring catarrhal inflammations still remained as an important causative factor. Chronic catarrhal deafness was a preventable disease. In every one of these patients they would find besides their nasal trouble some functional disorder or a habitual and gross transgression of nature's laws. These errors must be corrected. Assuming that their patients were sensible and intelligent people it was just and expedient that we should go quite into detail in explaining nature's method of repair and the different steps of treatment. No further encouragement or promise was necessary if they made the points clear. An ignorant patient failed to appreciate the obstacles. Their best policy was to be honest. The plan that appeared to him most reliable was chronic catarrhal deafness was to see that each removable cause was taken care of, then after the parts were healed make a new test of the hearing and begin the second stage of their work. They must not expect much improvement in hearing during or soon after the nasal operative stage. Chronic catarrhal deafness was not so formidable, but the fact that the patient was adding to it so many days in each year was the reason they were baffled.

Dr. Taylor said they ought to tell their patients that the treatment will last all their lives, if necessary.

Dr. Holmes also recommended frankness with patients.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, October 25, 1899.

Robert C. Myles, M.D., Chairman.

Apparent Tracheal Stenosis in Case of Aneurism of the Arch of the Aorta with Specimen.

Dr. Francis J. Quinlan reported a case occurring in his service at the City Hospital during the previous week. A man had been admitted two days before he had seen him, the visiting physician had examined his chest and concluded that the marked cyanosis was due to a tracheal stenosis. It had seemed to the speaker that there might be an aneurism of the aorta. On examination of the larynx he had found the right cord in a condition of abductor paresis, the other cord doing all the work. On closer examination he had found pus issuing from the posterior commissure in considerable quantity. After the cavity of the larynx had been cleaned and cocainized he had found the mucous membrane pushed over to the median line with considerable submucous infiltration. A low tracheotomy was concluded. Three drops of a 4 per cent solution of cocaine had been used in performing the anesthesia. An incision was then made through the crico-thyroid ligament and the cricoid cartilage divided. The blood had welled up most profusely, making it difficult to reach the trachea, but finally succeeded in introducing a tube, this gave immediate relief. The tube was inserted very carefully, keeping in mind the possibility of pressure on the vessels. The patient remained comfortable that afternoon and evening, but next morning the same dyspnea and cyanosis reappeared, which was somewhat relieved for a time by the use of nitroglycerine and heart tonics. The man died three days later, and the post-mortem examination had revealed an enormous unruptured aneurism of the arch of the aorta. The purulent infiltration had evidently been secondary to the aneurism. He had seen four cases within three years in which the cord had been in this state of unilateral abductor paresis, and as it generally associated with aneurism of the arch of the aorta.

A Contribution to the Technique of Modern Uranoplasty.

Dr. James F. McKernon read a paper on this subject. He said that, at the suggestion of a general surgeon, he had tried the plan of administering the anesthetic through a tracheotomy tube, keeping in the tube for eight or ten days, and feeding by rectum, thus giving an opportunity for the healing without infection of the operation wound. He had used the method in four cases, the oldest over twenty years, and the youngest, three years old. In all four the cleft had extended through both the hard and soft palate. The chloroform should be administered in the usual way; then tracheotomy should be performed and the anesthetic continued through the wound in the trachea. The mouth gag having been inserted, a large flat piece of sterilized gauze, with string attached, is placed at the back of the tongue, thus shutting off the larynx and esophagus. Several such gauze pads should be on hand ready for use. After cleansing of the operative field and vicinity the edges of the cleft were prepared, beginning at the lower portion. As a rule, scissors were preferable for this purpose, as they leave a beveled surface which is conducive to accurate approximation. Having freshed the edges of the soft palate the hard palate should be prepared in the same manner. The incision should be continued in the form of an ellipse at the apex around to the opposite side. When a rudimentary uvula was present care should be taken not to destroy this, as it was a great help subsequently. A curved incision was next made in the hard palate close to the alveolar border, extending through the mucous membrane and periosteum to the bone. A small, rather sharply curved periosteotomy should be used to separate the periosteum from the bone, care being taken not to injure the palatine vessels. An "apron" was thus obtained, which could be easily approximated in the center. Before inserting the sutures the bleeding from the edges should be stopped by the application of hot gauze sponges. For the insertion of the sutures he used specially made needles, a right and a left. The sutures should be passed from before backward, and, as a rule, about one-third of an inch apart. There should be absolute freedom from tension. After cleansing of the oral cavity with a normal salt solution, a thin strip of sterilized gauze should be passed to the under surface of the soft palate and the posterior pharyngeal wall. Sterilized gauze should also be used over the whole of the operative field, the gauze being pressed rather closely against the under surface of the new palate. Should vomiting occur during recovery from the anesthetic the wound must be redressed. This

vomiting could sometimes be averted by the hypodermic injection of morphine in adult cases before they recovered from the anesthetic. The nourishment should consist of peptonized milk for a period of a day or two, and then liquid peptonoids should be added. A normal salt solution should be given in the rectum at intervals, especially at night, as it relieved the thirst. The nurse should hold a pad over the anus for fully half an hour after the nutrient enema had been given to insure its retention. The packing should be removed each day and replaced by clean gauze because of the increased salivary secretion. The sutures should be removed one or two at a time. Silk sutures could rarely be left in more than eight days, but this was long enough to accomplish all that was to be expected of them. About the tenth or twelfth day, the patient being able to take food by the mouth, the tube could be removed. The tracheotomy wound would then soon heal. The following cases were reported:

Case I.—An anemic man of twenty-two years, whose palate had been operated upon, though unsuccessfully, when nine years old. Silk sutures were used in this case. There was no vomiting. The dressing was removed on the second day, and changed thereafter daily. At the end of the fifth day two sutures were cut and removed on the following day. On the tenth day some warm milk was given by mouth, and two days later the tracheotomy tube had been removed. The patient had been kept under observation four months, during which time his general health had greatly improved, and his articulation had become decidedly better, but there had not been so great a change in this respect as would have occurred in a younger person. At the end of twenty months the man had reported that he was able to talk fairly well.

Case II.—A woman, twenty years of age, who not only had a cleft of the hard and soft palate, but a congenital hare lip. At the age of four years the hare lip had been operated upon, but the stitches had torn out, leaving a larger cleft than at first. There was a large cleft in the hard palate, and no uvula was present. Talking was so difficult and painful that she rarely attempted it, and never in the presence of strangers. There was marked hypertrophy around each Eustachian orifice. The turbinated tissues were hypertrophied and covered with mucus. The width of the cleft in the hard palate was a little over three-fourths of an inch at its junction with the soft palate. The closure had been effected with silk sutures of medium size. The hare lip had also been operated upon, the wound being dressed with sterilized flexible

collodion. The last sutures had been removed on the eleventh day when there had been complete union. Three weeks after operation the first attempt had been made to teach her to talk, and this instruction had been kept up for four months. When seen some months later she could carry on a conversation almost perfectly, except for the pronounciation of a few sounds. Her general condition had also been very greatly benefited.

Case III.—A widow, thirty-three years of age, had sought treatment because of impaired hearing. Twelve years before, at the time of her marriage, she had had teeth drawn and a plate fitted over so as to imperfectly cover the cleft. When this plate was removed she could hardly talk at all. Examination showed the cleft to be an inch in width at its widest part. The mucous membrane of the pharynx was dry and atrophic, and there was marked atrophy of the mucous membrane around the Eustachian orifices. There was marked retraction, with thickening of the membrana tympani, and marked diminution in hearing on the left side. The left Eustachian tube had been found almost occluded. She had begun to breathe badly as soon as the administration of the chloroform through the tracheotomy tube had commenced. After time ether had been substituted, and then her respirations had become natural. Owing to the thickness of the periosteal flap heavier silk had been used for the suturing. The last sutures had been taken out ten days after the operation, and healing found to be perfect. Because of the age of the patient very little improvement in speech had been promised, nevertheless there had been a decided gain in this respect, and her tinnitus had disappeared and the hearing had been greatly improved.

Case IV.—A girl of three years, seen on January 9, 1899. There had been a cleft in the soft palate and in the posterior two-thirds of the hard palate. A rudimentary uvula was attached. Owing to regurgitation of food, it was difficult to feed her. There was always a croupy cough at night. Adenoids were removed under ether one month before operation on the palate. Silver wire sutures had been employed in this case because of the excellent results obtained with them by Dr. Lester. The needle was not threaded until it had been passed through each flap. The sutures had been placed about one-third of an inch apart. There was a marked vomiting on recovering from the anesthetic, necessitating a renewal of the dressings. The child had been very restless for the next two days. The last sutures had not been taken out until the end of two weeks. The union was perfect. One

month after operation the first attempt had been made to teach the child to talk. Improvement in this respect had been very rapid and gratifying during the six months which had elapsed.

When there was a cleft in both hard and soft palate, the speaker advised that both be closed at one sitting, as this caused less shock and gave better union than when each was closed separately. As a rule the silk should be removed in from seven to ten days, while silver wire should be left for several days longer. The lateral incision should be packed lightly with gauze, as this favored good approximation. If the operation were done before the child had learned to talk the effect on the speech function would be better than if done later. He did not believe the preliminary tracheotomy in an uncomplicated case added any special risk to the operation, owing to the compensating advantage of greater cleanliness of the wound, and the increased rapidity allowable in operating. The operation improved the condition of the nose, pharynx and ears, and had a most beneficial effect on the patients' mental condition as well as their general health, and markedly improving their speech.

Dr. B. Farquhar Curtis said that the reader of this paper was to be congratulated on his excellent results. He approved of operating upon cleft palate at a very early age: that is, before the children had learned to talk in the wrong way. If the operation were deterred until the child was six years old it was true the parts would be larger and the operation to that extent made easier, but the muscles were not properly developed and the speech function was apt to be very much impaired on this account. He adopted the idea of Wolff in operating early and dividing the operation into two parts. By doing this the lateral incisions and the separation of the periosteum from the bone, and all the bloody manipulations would take place at the first sitting, so that at the second there would be little or no hemorrhage. The tedious part of the operation was the adjustment of the stitches and approximation of the flaps, and was done at the second sitting. This could be done very much more easily when there was but little bleeding, and this was an advantage also for the child. He believed, therefore, that statistics would be improved by dividing the operation in this way into two parts. For the separation of the flaps he used a rather broad elevator, keeping the finger pressed on the mucous membrane on the opposite side, thus guiding the work by the sense of touch and controlling the hemorrhage. Sterile gauze should then be packed in between the bone and flap, and then the process repeated on the other side. Much less blood was lost in this way,

as a rule, than by the other method, and the operation was so short that there was little or no reaction. A few days or one week later the paring and the other steps of the operation were done. Another point to be considered was the question of doing a tracheotomy. It had always seemed to him that the introduction of a tracheotomy for an operation on the mouth or throat, even in adults, meant the addition of an unnecessary risk, and in operating on the tongue, or in doing a laryngectomy, he had always had the best results when he had not done a preliminary tracheotomy. The introduction of the tracheotomy tube was liable to result in a pneumonia. Fluid could be prevented from entering the larynx while operating upon cleft palate by having the child's head hanging over the edge of the table in an inverted position, the blood collecting in the upper naso-pharynx and flowing out of the nostrils, which are then the most dependent opening. The only advantage, therefore, of the tracheotomy seemed to be that the operation could be done without any pause. It seemed to him to be more dangerous in children than in adults, because of the greater liability to infection of the bronchi.

Dr. Charles H. Knight said that the single point in the technique which commended itself to him was the manner in which the sutures were introduced by means of a specially devised needle. He was by no means sure of the desirability of dressing the wound by packing the oral cavity with gauze, thus necessitating the preliminary tracheotomy. He was convinced that the latter imposed upon the patient an additional risk without a compensating advantage. The daily changing of the dressing showed that the treatment of the wound was not such as might be employed in other parts of the body. It is impossible to keep the dressing aseptic for any length of time, the danger of blood and debris entering the larynx during the operation may be readily obviated by placing the patient in Rose's position, hence there seems to be no reason for the preliminary tracheotomy. The difficulty of opening the trachea and the subsequent risks involved should not be estimated too lightly.

It was well known that in some cases the stitches would cut through, even in the absence of undue tension. The explanation might be found in a neglect to secure a proper state of health before operating. The effect of operation upon the temper and disposition of the subjects of cleft palate, particularly the older ones, was quite remarkable. He recalled a girl of ten years operated upon some years ago. She had previously been very peevish, yet

in a few months she had become so cheerful and happy that he could hardly recognize her. He would like to know whether a similar effect had been observed after the adjustment of an obturator. It had seemed to him that any mechanical appliance might be so irksome to some individuals as to be practically intolerable.

Dr. Arthur B. Duel said that he had no cases in which there had been a complete fissure in the hard palate, but he had seen enough of Dr. McKernon's work to be convinced of the advantage of the preliminary tracheotomy in those cases. From a limited experience in the treatment of cases of cleft of the soft palate he was convinced that there was a distinct advantage in making the lateral incisions a few days prior to trimming the edges and uniting the median fissure. The small quantity of ether required at the second operation, and consequently the diminished liability to vomiting and soiling of the wound, was an advantage. With the large lateral incision needed to relieve tension, there was always an impairment in the circulation which would probably be much improved by waiting a few days before completing the operation; and this naturally tended to secure better union. He had himself devised a simple needle which seemed to him to greatly reduce the time required for the insertion of the sutures—certainly in his own case it had lessened the time fully twenty minutes. The point containing the needle was exactly parallel with the shaft of the instrument, and width of the stitch was always determined by pushing the shaft to the edge of the cut surface and drawing the needle forward, thus making an interval of about an inch between each stitch. Moreover the stitches were bound to be inserted parallel to the preceding ones. With this needle they could be inserted quickly without making loops or using a right and left hand needle.

Dr. Emil Mayer asked if any one present had had any experience with the hypodermic injection of atropia before an operation of this kind. One such case had been reported, in which, following the hypodermic injection, the mucous membrane had become so dry that the pouring of the saliva over the wound had been obviated. His own experience had been confined to the treatment of cases in the soft palate only. It seemed to him that the best suggestion made by Dr. Lester, who was mentioned by the reader of the paper, had been that the sutures be brought in first before any roughening of the edges. In a case upon which this method had been tried the ultimate result had been perfectly satisfactory although at one time it had looked as if all of the sutures would slough

out. In this case the wire sutures had not been taken out until over four weeks after operation.

Dr. T. Passmore Berens suggested that if the jaws were pushed together in the manner described by the last speaker, the result would be a very bad arrangement of the teeth in the upper and lower jaws and a very high arch to the palate. He did not approve of this method.

Dr. M. D. Lederman asked Dr. McKernon whether he had generally found a hypertrophic condition of the neighboring structures, turbinals and adenoid vegetations. In a case now under his care a mass of adenoid tissue, as large as a quarter, had been removed. He has seen a few cases of cleft palate in which these tissues were considerably hypertrophied, thus demonstrating that negative atmospheric pressure is not such an important factor in generating enlargements of these parts.

Dr. Quinlan said that tracheotomy seemed to him a very formidable operation, because of the danger of septic bronchitis or pneumonia. He was surprised, therefore, that the members had not administered a sterner rebuke to the author of the paper for such trivial reference to a preliminary tracheotomy. It could not be denied that the results obtained by Dr. McKernon had been so excellent as to somewhat counteract this notion in his own mind. He referred to a case in which, by the use of the suprarenal extract, he had been able to control hemorrhage and make the necessary dissection with ease. The case was one of ordinary cleft palate. A figure of eight incision has been practiced in the hard and soft palate during the past five years which relieves the great tension on these parts.

Dr. J. H. Woodward congratulated the reader of the paper on the excellency of his technique and on his results. He did not think any series of reported cases were superior to them. Such results could not be secured unless the principles underlying the operation were correct. The care taken to relieve all tension upon the sutures was probably one of the secrets of that success. The doing of this at one sitting had been possible because of the preliminary tracheotomy. There were traditions in medicine which were incorrect, and this one about tracheotomy being so dangerous in these cases seemed to him a case in point. He would like to know from the members how many cases of septic bronchitis or pneumonia they had met with as a result of a tracheotomy. Personally he would prefer to do a preliminary tracheotomy, if called upon to do a bloody operation on the mouth. The mode of dress-

ing the wound seemed to him open to discussion: it was a matter to be settled by an appeal to future experience.

Dr. R. C. Myles referred to a case of operation on a cleft palate which he had reported and presented to this section some years ago. The success in that case he believed depended upon the extensive incisions that had been made along the borders of the hard palate. The operation had been done under cocaine anesthesia on a man over twenty years of age. He had been improved in every sense by the operation, his speech ultimately becoming fairly good. The subject of tracheotomy under these circumstances was a rather new one, but he could not help being aware of the danger of septic bronchopneumonia in cases of tracheotomy associated with extensive wounds of the throat. The suggestion about using suprarenal extract in these cases seemed a valuable one, especially if used on the surface and hypodermically.

Dr. McKernon closed the discussion. He said that previous to using the present method he had tried the plan of doing the operation in two sittings, and the results had not been nearly as good as by doing it at one time. He saw no corresponding benefit to the patient, the operation at one sitting not being inordinately long. The sense of touch in using the pinosteal elevator, as Dr. Curtis had said, was a sufficient guide in this step of the operation. Even with the head very low down the blood would sometimes collect in the pharynx, and was prone to run into the larynx; hence, the advantage of the tracheotomy. It had seemed to him that the gauze packing was desirable, protecting the operative field from external infection. It did not seem to him possible to introduce the stitches—complete sutures—into the hard palate before the loosening of the flap, no matter what form of needle was used. He did not advocate preliminary tracheotomy for operation on the soft palate alone, but only where there was a complete or nearly complete cleft in both the hard and soft palate. In the future he would use only silver wire for the sutures, as the approximation was better and the sutures could be left in longer. He had had no experience with atropia in these cases. Regarding the procedure proposed by Dr. Lester, he agreed with Dr. Berens as to the disastrous effect on the teeth. He was opposed to deferring the operation until after puberty; certainly far better articulation was secured by operating earlier. In all of the cases the turbinates had been enlarged; in one the tissues had been atrophic, possibly owing to the age of the patient. Regarding the preliminary tracheotomy, he would say that two general surgeons in this city are practicing it,

with uniformly good results. The danger of this procedure upon a normal case seemed to have been exaggerated by some of the speakers, as in all the cases which they cited the tracheotomy had been done to relieve existing diseased conditions, and a tracheotomy for these cases from the standpoint of danger and mortality should not be placed on a comparative basis with a simple, uncomplicated and such as advocated. Since the writing of this paper three more cases have been successfully operated upon by this method.

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

It is our purpose to furnish in this Department a complete and reliable review of the world's current literature of Rhinology, Laryngology and Otology.

Authors noting an omission of their papers will confer a favor by informing the Editor.

I. NOSE.

The Bacteriology and Histology of Ozena—V. COZZOLINO—*Annals Otol. et Rhinol.*, August, 1899.

A scholarly discussion of the bacteriology and histology of ozena in which the author concludes that micro-organisms are secondary in their effects to the primary factor of a favorable soil for their development. He contends that the bacillus (*bacillus mucosus*) is not the prime etiologic factor in ozena, but that the micro-organism finds a favorable soil for its development in the nasal fossæ, which are endowed by virtue of their embryologic and teratologic natures, with features highly commendable for a microbic habitat—in fossæ that are normal there will be no such growth. In forty-two cases he found the *bacillus mucosus* in all: pseudo-diphtheria bacillus eight times; *staphylococcus pyogenes aureus* nine times; *staphylococcus pyogenes albus* seven times; *sarcina aurantiaca* once; *streptococcus pyogenes* in long chains four times; filamentous bacillus once; *bacillus prodigiosus* once; non-classified cocci twice; *bacillus pyocyaneus*, green variety, seven times, and tubercle bacillus once, in an exposed patient. The investigations confirm Loewenberg's (1888-94) observation that the *bacillus mucosus* is present in all cases of atrophic rhinitis. Abel (1894) arrived at the same conclusion from a close study of 100 cases. The author, while admitting that the *bacillus mucosus* is the prime etiologic factor thinks it responsible for two of the most disagreeable symptoms—*fetidity* and *crusts*. The etiology of the bone atrophy, and in consequence, of the mucosa can be found in a nutritive alteration of one or both turbinated bodies. The ozenous child is born *ozenous*; he comes into the world with a special predisposition for these nutritive changes, which determine an erosion of the bone, and its ultimate destruction, and an atrophy of this mucosa of the turbinated bodies. The author cites as evidence that the disease is not due to a specific micro-organism, but to a local predisposition, the fact that it is strictly local, and of a chronic character. Therefore ozena is not infectious.

F. C. E.

Diagnosis and Endo-Nasal Treatment of Empyema of the Frontal Sinus.—DR. GUSTAV SPIESS, Frankfurt, Germany.—*Abstract of a Paper presented to the Meeting of the British Medical Association, Portsmouth, August, 1899.*



The diagnosis of frontal sinus empyema was, up to a few years ago, extremely difficult. We are now, however, able to make in most cases an exact diagnosis with nearly absolute certainty. The sub-

jective symptoms may be suggestive, but they are not in themselves to be trusted. There are three methods by which we may arrive at an exact diagnosis:



1. The examination of the nose: this may give a suggestion.
2. Exploratory syringing through the nose opening may in certain conditions confirm the diagnosis.
3. Exploratory punctures from the interior of the nose: this makes the diagnosis absolutely certain.

After discussing the appearance of pus in the nose, the writer refers to the uncertain results obtained by trans-illumination of the frontal sinus, as according to Vohsen the frontal sinus is wanting on both sides in 14 per cent of cases, and in one side in 20 per cent. Hence the obscurity of one frontal sinus, associated with pus in the front of the middle meatus on the same side, might raise a suspicion, but would not do more than this. He then refers to the use of the Röntgen Rays, and to the probing and washing out of the sinus through the infundibulum. He states that it is always difficult to know when the frontal catheter had actually entered the sinus, and had not strayed off into one of the infundibular cells.

This brings him to the advantage of his special method, which practically consists in so controlling the position of a probe by means of the X-Rays that he does not hesitate to drill an opening from the nose into the frontal cavity. The writer employs a drill about 3 mm. thick, worked by electricity. The operation is thus executed: After thorough application of cocaine this drill, 3 mm. thick, is introduced into the nose, if possible, as far as the nasal roof. Then the room is darkened; the direction and position of the drill is verified on the Röntgen screen. The drill must be directed exactly to the center of the frontal sinus, avoiding also the anterior wall. As soon as the drill is in motion one easily sees on the Röntgen screen how it advances slowly until it has entered into the open space of the frontal sinus. The boring is interrupted from time to time in order to prevent the drill getting too hot. The operation is claimed to be not very severe, and to be executed in a few seconds. The author has operated on ten cases without observing any hemorrhage. He thinks that puncture of the frontal sinus by boring under the control of the X-Rays could be done easily, quickly, and with absolute certainty, so that a diagnosis can be made every time, and that as regards treatment he considers that the endo-nasal trephining ought to be first employed in every case and an external operation should only be employed if success is not obtained by his method, or if the patient insists upon operation. So long as the external operation does not give absolutely certain results, the author cannot conscientiously advocate it.

STCLAIR THOMSON.

Half-tones by courtesy of the editors of "THE PRACTITIONER."

The Building of a Nose Upon a Metallic Base—*The Therapeutic Gazette*, October, 1899.

In a leading article upon this subject, the suggestions of Marten are quoted. This author states that the ulceration is generally due to the fact that the flap, taken for the formation are insufficient.

For substantiation he refers to some illustrations published with his original article.

The base of support, not necessarily bone, should be large and not subject to any great pressure. The scaffolding upon which the nose is built may be displaced owing to the constant motion by the contraction of the face muscles. This may be pre-empted by firm fixation.

LEDERMAN.

The Importance of the Early Recognition and Treatment of Catarrhal Diseases—W. SCHEPPEGRELL.—*New Orleans Med. & Surg. Jour.*, Sept., 1899.

The fallacious theory that patients will outgrow catarrhal affections has been responsible for many cases of defective hearing and serious throat and chest diseases. Children especially should have early treatment, which frequently gives brilliant results at this time of life.

Many affections of the ear are insidious in their development, and frequently do not come to the attention of the aurist until serious pathologic changes have been effected. The treatment in these cases is often unsatisfactory, while good results might have been obtained had they been recognized in their early stages and prompt treatment applied. _____ SCHEPPEGRELL.

II. MOUTH AND NASO-PHARYNX.

Notes on Adenoids—ALEX. FRANCIS—*Austral. Med. Gaz.*, Vol. xviii, No. 8, August, 1899.

The article deals chiefly with the indications for operation, and the author holds that: "To operate in cases of adenoids where there are no symptoms either as regards the ears or general health is not only unnecessary but unjustifiable." In dealing with the question of the advisability of operating he also holds that there are two classes of cases met with. In the one the operation is imperative, in the other conditional. The first includes convulsions, especially in children after babyhood, and all grave conditions of the ears. The second includes all other cases. These have to be decided on their merits.

The author believes: "There is a strong antecedent probability of some recurrence of the hypertrophy, however well the operation may be performed." He knows of several instances where a child presented no symptoms of the presence of adenoids until after an operation for their removal. It is extremely difficult to make sure of leaving a clean, smooth vault. The author believes it necessary "to choose a good day, and to get the surroundings as favorable as possible for the operation." He finds that the nasal and post-nasal wounds will not heal quickly in moist, cold weather, and that one of the chief objects to be aimed at, in order to avoid recurrence, is to get the raw surface to heal as quickly as possible.

In operating, he prefers a particular modification of Læwenberg's forceps, with which he removes the greater part in three or four pieces, and then a few sweeps of a ring knife, as a rule, leaves a perfectly smooth surface.

As to the position in operating, he thinks it well to have the head lowered, but that it is important to have it on a gentle slope, and not hanging sharply over the edge of the table, since in the latter position the stretching of the neck and the possible laryngeal spasm is greater than when the head is on the table with the shoulders slightly raised.

Ether he believes contraindicated on account of the venous congestion. Notwithstanding the statements of the Vienna pathologists, he holds that chloroform is as safe in this as any other operation as long as proper care is taken in the control of the bleeding. In two cases of others and one of his own, death, which seemed imminent, would have been ascribed to chloroform syncope, whereas, in reality, the trouble was blood in the larynx, and all anxiety was relieved the moment this was removed. In these cases the danger was not supposed at the time to arise from interference with respiration, for the patients continued to perform respiratory movements.

EXON.

III. ACCESSORY SINUSES.

Acute Frontal Sinusitis—HENRY L. SWAIN, New Haven, Conn.—*Medicine*, November, 1899.

The author holds that the recurrence of influenza lessens the resistive powers of the nasal mucous membrane, and predisposes to the more frequent occurrence of acute frontal sinusitis.

Diseases of the middle turbinate region may create foci of infection near the opening of the canal, leading to congestion and increased secretion, which if retained results in pus with all its attending symptoms.

In the treatment he advocates the liberal use of hot water externally and hot salt solutions locally in the nose.

STEIN.

A Report of the Operative Treatment of Frontal and Maxillary Sinusitis—F. W. HINKEL—*Buffalo Med. Jour.*, Nov. 1899.

The author, in an interesting article, calls attention to the operative treatment of a number of cases. In a case of frontal empyema with antral symptoms an incision was made along the inner half of the left supraorbital ridge, a little beyond the middle of the globella, the soft parts and periosteum were retracted, and the anterior wall of the left frontal sinus opened with a small trephine. The incision thus made has a cosmetic advantage over the vertical one. The sinus was filled with a greenish offensive pus. The incised tissues were protected by a dam of iodoform gauze, and the sinus flushed with a normal salt solution. The walls of the sinus were thoroughly curetted, and the naso-frontal opening enlarged until an ample opening communicated with the nasal chamber. A strip of iodoform gauze was inserted in the enlarged infundibulum, and the external incision closed by silk suture—usual aseptic dressing applied and retained by a gauze bandage. Intra-nasal insufflations of iodoform were applied every three hours, after gentle spraying with a normal salt solution. The gauze drain was removed on third day. On the sixth day the stitches were removed. Good union had taken place, and on the eighth day after operation patient was discharged cured. There has been no return of the symptoms of the disease.

The main point of interest in the preceeding case was the immediate cessation of the antral discharge as soon as drainage of the frontal sinus was secured.

In two cases of chronic antral empyema, operations were performed after the method of Luc: viz., the antrum opened through the canine fossa, a counter opening through the nasal wall, beneath the inferior turbinate, and then closing the opening through the canine fossa by stitching the mucous membrane of the oral conjunction.

In the first case the gingivo-labial incision was sutured, and some difficulty was encountered when later stitches were made, as the stitches primarily inserted were more or less torn. In the second case, the gingivo-labial incision was not sutured and the parts coapted nicely. The author, therefore, infers that suturing of the gingivo-labial incision is unnecessary. The wound need not be disturbed. Patient being fed on soft food, and using the opposite side of the mouth in masticating, and avoid blowing the nose violently.

E. D. LEDERMAN.

Diagnosis and Therapy of Diseases of the Nasal Sinuses—SEIFERT—*Münchener Med. Wochenschrift*, May 23, 1899.

At a meeting of the Medico-Physical Society at Wurzburg held April 23, the author read a paper on the above subject. As a means of diagnosis in cases of suspected sinus trouble he urges the use of negative Politzerization. The nasal cavities having been first scrupulously cleaned, so that no secretion can be seen, the patient is given a swallow of water which he is to swallow at the word of command. The compressed Politzer bag is then held tightly to one nostril and as the patient swallows, it is allowed to expend. The consequent rarification of the air in the nostrils draws out the secretion from the sinuses, if there be any. Of course a careful inspection of the nasal cavities should be made as soon as the maneuver is completed. The mere act of drawing out the secretion has a curative effect in many acute cases; as is shown by the healing of seven cases of acute empyema of the frontal sinus and four cases of acute empyema of the maxillary sinns under this treatment.

VITTUM.

IV. LARYNX AND TRACHEA.

What Causes the Shallow Depressions in Pachydermatous Thickenings Over the Processus Vocalis?—A. KUTTNER—*Archiv. für Laryngologie*, Band ix, Heft 3, 1899.

The author endeavors to show that both Virchow and Frankel were right in their varying views as to the cause of these depressions. He has of late come across a case which shows that they cannot depend wholly on pressure of the opposed cord, for this case the two cords were situated in such different planes that when they were ap-

proximated one could still look down into the shallow depression on the left side. His view is therefore that Virchow was in part right in attributing this depression to the closer adherence of the mucous membrane to the underlying cartilage. The author, however, thinks that both the eminent authors are partly in the right, for he inclines to the view that both causes have to do with the matter in hand.

VITTUM.

The Mechanics of Coughing—AD. VALENTIN—*Archiv. für Laryngologie*. Band ix, Heft 3, 1899.

After citing the explanations that have been current for years, especially the view that the edges of the tightly closed glottis were suddenly and violently driven asunder by the current of expired air, the author advances an explanation of his own.

He places the order of events as follows: "A sudden and very deep inspiration with abduction of the cords is followed by a forcible adduction of the latter, causing a firm closure and compression of the glottis. At the same time occurs an increasing compression of the chest by the muscles of expiration, the lower jaw is somewhat dropped, the mouth open, the tongue pointed and projected slightly forward. The soft palate is elevated. Then follows the real concussion of coughing. The spasmodically closed glottis is not by any means forced open by the column of expired air, but the spasm of the adductors suddenly ceases and one can see how the previously adducted arytenoids and vocal cords become abducted with lightning-like rapidity. The glottis opens often to the widest possible extent. After the impulse of the cough is over, the cords close again, but not so tightly as before. Of course the sudden and great expansion of the glottis is due to a reflex contraction of both postici. This contraction differs from the ordinary inspiratory contraction mainly in the rapidity of its occurrence." The author has assured himself of the correctness of these views by numerous laryngoscopic examinations and by animal experiments.

VITTUM.

The Treatment of Pulmonary Tuberculosis by the Inhalation of Antiseptic Nebulæ—HOMER M. THOMAS, Chicago, Ill.—*Ua. Med. Semi-Monthly*, October 13, 1899.

The advantages of nebulization are: Control of cough, relief of dyspnea, intimate contact of the antiseptic nebulæ with the inspired air, and inhibition of the extension of tubercular foci. A hospital has recently been established in this country where this method of treatment is being effectively used.

Of the various preparations used by the author, he has had the best results from formalin, commencing with a four per cent solution of the forty per cent aqueous commercial solution, in water, and increasing the strength daily until twenty per cent is reached.

SCHEPPEGRELL.

V. EAR.

Acute Inflammation of the Middle Ear—How Shall we Treat It?—

H. O. RIEK—*Mary. Med. Journ.*, October, 1899.

The author mentions those cases of frequent earaches occurring in children, and passing away without suppuration, but returning on the slightest provocation. In these instances examination of the throat will reveal some form of inflammation, enlarged tonsils or adenoid tissue in the pharynx.

Where redness of the drum is seen with bulging, prompt incision is recommended. Leeching is also suggested as a good remedy. Antiseptic precautions should be taken before incising the membrane. Hot water douching also affords relief. The local application which has given the writer the most satisfaction is a combination of cocain muriate gr. ii, atrop. sulph., gr. j., aq. dest. 5j. Eight to ten drops being placed in the canal, after being heated. Calomel in small doses should be administered, and the nose and throat should receive attention.

LEDERMAN.

Report of a Case of Acute Purulent Endo-Mastoiditis Developed in the Course of a Chronic Otorrhea; Followed by an Extra-Dural Abscess with Sloughing of the Dura Mater; Metastatic Abscess of the Lung with Spontaneous Evacuation of the Cavity—Recovery—P. M. PAYNE—*Annal Otol. et Rhinol.*, August, 1899.

An interesting case of a Spanish cabin boy, aged sixteen, brought to the New Orleans Sanitarium, December 9, 1897. A Schwartz operation was performed by Dr. A. McShane. Temperature continued at about 103°. Cough and rigors developed, and suppuration was so foul and abundant that an extensive Stacke was done December 17th. Temperature fluctuated from 96⁵/₁₀ to 106° until December 29th, when a mass was observed to pulsate in the wound which proved to be a slough of the dura mater. Thorough irrigation removed much fetid pus from the region of the lateral sinus, after which he seemed better, continuing until January 27th, when he was discharged. The site of the lung abscess was never located, its existence being determined by the bad smelling pus which he coughed up daily, especially during the rise of temperature.

A letter written from Liverpool, and dated March 3d, acknowledged himself in a perfect state of general health with complete recovery from the local affection.

F. C. E.

Otitis Media—Diagnosis and Treatment—M. A. GOLDSTEIN—*Interstate Med. Jour.*,—November, 1899.

This paper, a clinical lecture before the McDowell Medical Society of Missouri, discusses in order the several forms of otitis media, congestive, suppurative and non-suppurative. The author believes that atrophic is the sequel of hypertrophic rhinitis, and

sclerotic otitis the sequel of hypertrophic otitis. The generally approved ground is taken in diagnosis, pathology and prognosis, and the paper is chiefly notable for some excellent methods in therapy, described, and for the author's position with regard to syringing in suppurative otitis media.

Both aspiration and inflation are employed for evacuating the pus contents of the middle ear. Aspiration is effected with a Siegle's speculum and small syringe attached. The tube is fitted tightly in the meatus, and the piston drawn slowly. This may be followed by Politzerization, but better by continuous inflation with Buttle's inhaler in connection with the air tank. The patient is made to blow steadily, with cheeks puffed out, through a small caliber tube, while the inhaler is applied tightly into one nostril with the finger compressing the other. This produces the same effect as the word "hic," advocated by Politzer and Gruber. The "dry treatment" is emphatically advocated, and the "wet" as positively condemned—the douche decried. The syringe is objected to because copious introduction of fluids into the ear will produce that bagginess and infiltration of the membrane we wish to avoid, especially in large perforations. A small tuft of cotton on a carrier will cleanse the meatus as effectively as a large current of antiseptic fluid. With large perforations there is the additional danger that the fluid may force infectious material into the healthy area of the tympanic cavity. Boracic acid is too mild an antiseptic; iodoform is odorous, stimulates granulation tissue, and cakes. Nosophen is non-irritant, insoluble, antiseptic, does not cake, and offers a minimum of toxic absorption, and has been used with excellent results.

F. C. E.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Foreign Body Removed from the Gullet—WM. CHILHAM—*Louisville Monthly Journal*, November, 1899.

The foreign body was a piece of bone which was removed by means of a horsehair bougie.

SCHLAPPEGRIEL.

Antitoxin in the Light of Scientific Investigation—A. ROBIN—*Internat. Med. Mag.*, October, 1899.

The writer effectually disposes of the arguments advanced by Herman in a recent paper published in the *Medical Record*, entitled "The Failure (?) of Antitoxin in the Treatment of Diphtheria." He presents a large amount of statistical information from the records of the hospitals of Europe, which demonstrates unmistakably the value of antitoxin. Turning to the laboratory, he shows that the testimony from this source is overwhelming in its support of the serum. As pathologist and bacteriologist to the Delaware State Board of Health, Robin is in a position to speak with authority.

DETWILER.

Some Practical Points in Intubation—A. G. BLINCOE, Bardstown, Ky., *Louisville Month. Jour. of Med. and Surg.*, October, 1899.

A detailed description of the technique of intubation. The author uses the modified tube, which has but one instrument for both introducing and extracting. This obviates the use of the obturator, thus permitting air to pass through the tube while it is being introduced.

SCHEPPEGRELL.

The Use of Calomel in Diphtheria—T. D. COLEMAN—*Internat. Med. Mag.*, October, 1899.

In the hands of the writer, calomel has been of the greatest service in the treatment of diphtheria. His rule is to give a large dose of the drug at the beginning, regulating it according to the age, and then to give hourly doses until characteristic "chop-spinach" movements appear, then the interval is increased until the drug is left off entirely. He has never seen any bad results follow the use of the drug, even in enormous doses. He mentions that his father gave to a boy of five years 360 grains in three days, and the child made a good recovery.

DETWILER.

VII. INSTRUMENTS AND THERAPY.

Beta-Eucain as an Anesthetic in Eye, Nose and Throat Work—

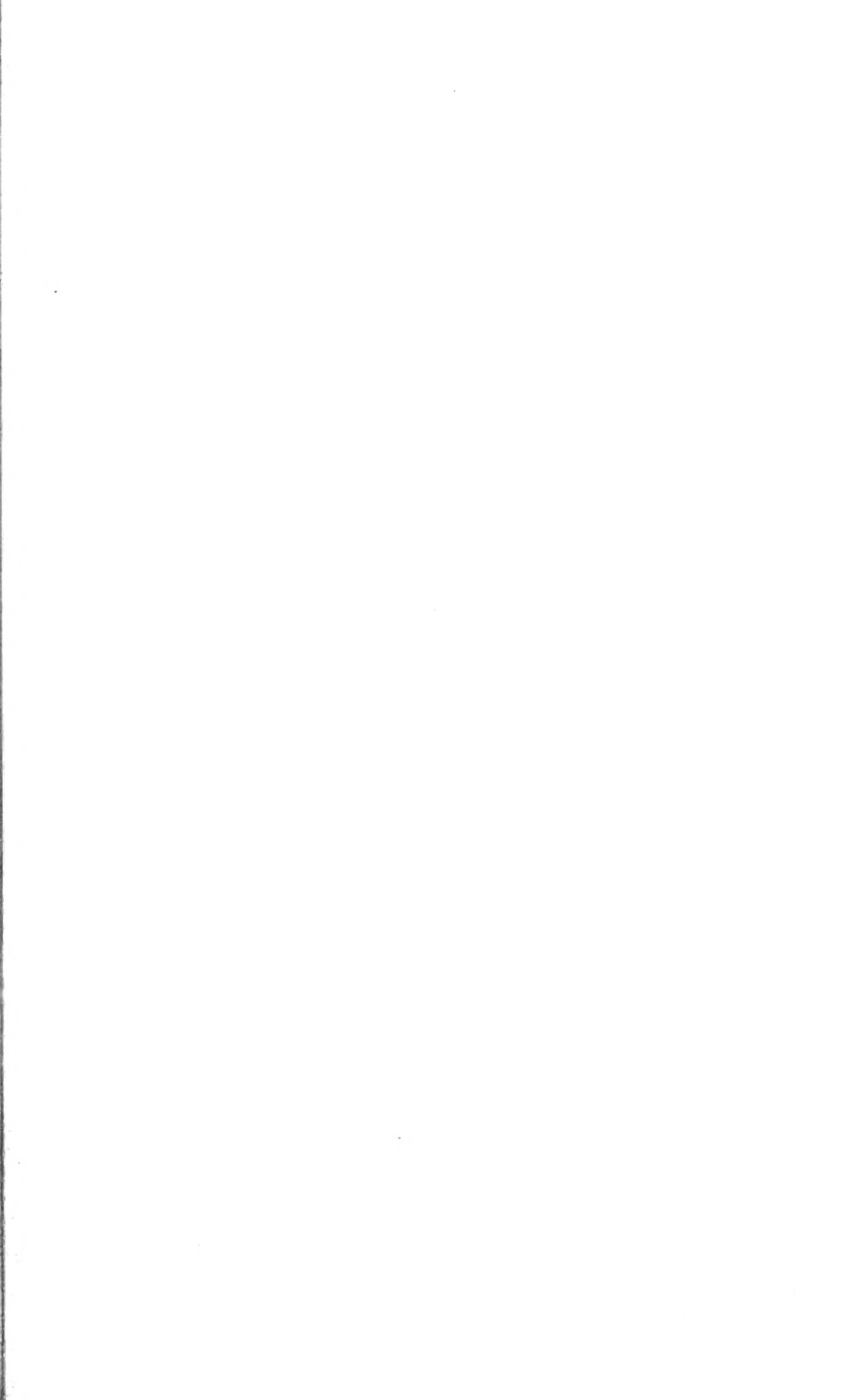
W. H. POOLE—*Med. News*, October 21, 1899.

The author has used Beta-Eucain in certain eye work, and in throat, nose and ear operations as follows:

Furuncle of auditory canal; paracentesis of drum; hypertrophied turbinate; galvano-cautery; polypi; enchondroma and foreign body. These are his conclusions:

1. Eucain is decidedly less toxic than cocain, therefore superior to it.
2. Its aqueous solutions keep well and can be sterilized by boiling without destroying the activity of the drug.
3. It produces anesthesia equally well and sometimes better than cocain.
4. It is superior to cocain in that it does not cause heart depression or other unpleasant effects.
5. It does not cause mydriasis or disturbances of accommodation, which is an advantage in some cases.
6. It is less dangerous to the cornea than cocain inasmuch as it does not cause desquamation of the superficial epithelium.

F. C. E.



SERIAL

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1.4

GERSTS

